KINGSVILLE DOME URANIUM MINE AREA DATA AND ANALYSIS
(A Work in Progress)

NOV. 20, 2012 QUESTIONS

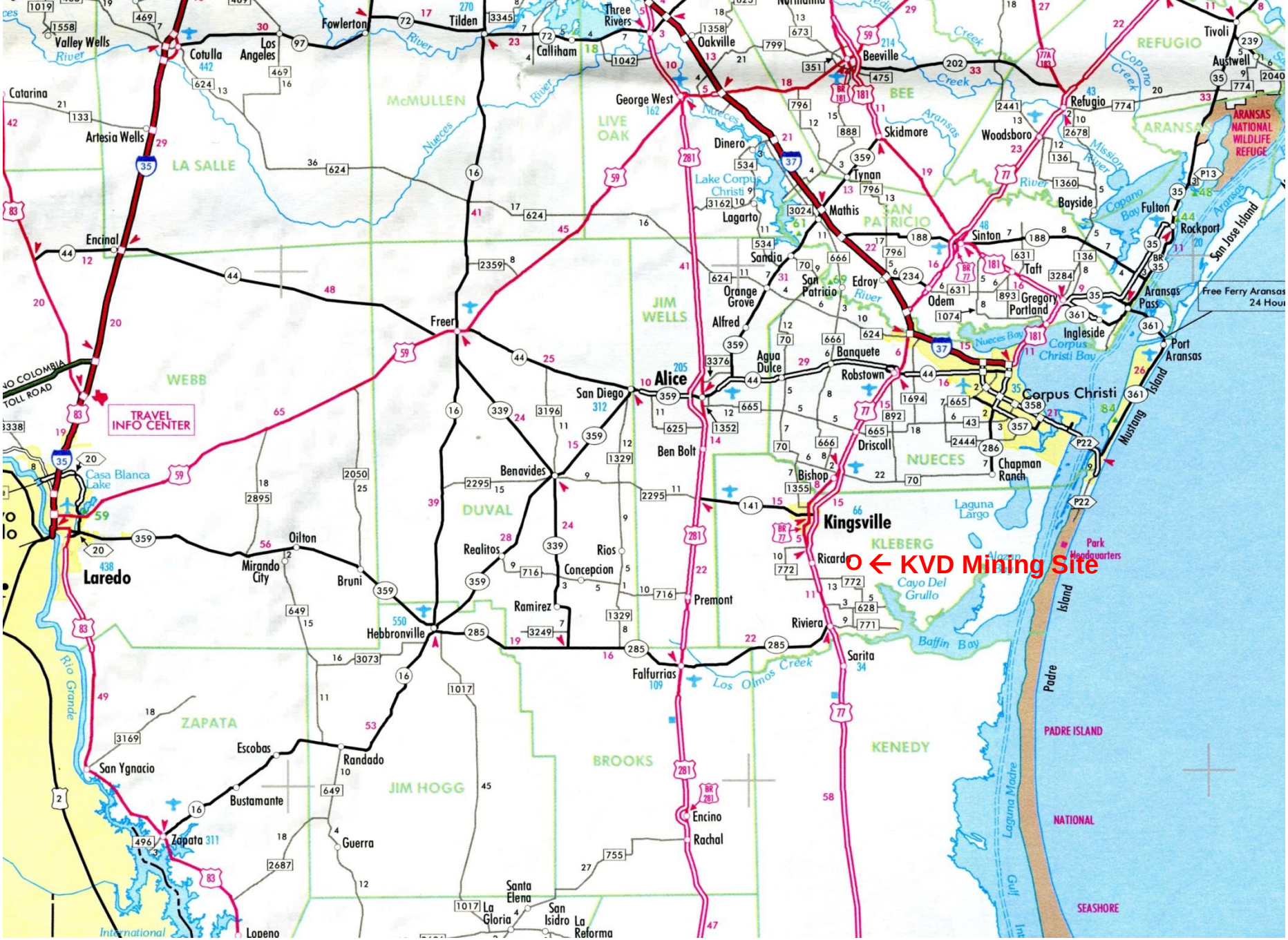
EPA, Region 6
Dallas, Texas

José Eduardo Torres
Petroleum Engineer
Chemical Engineer

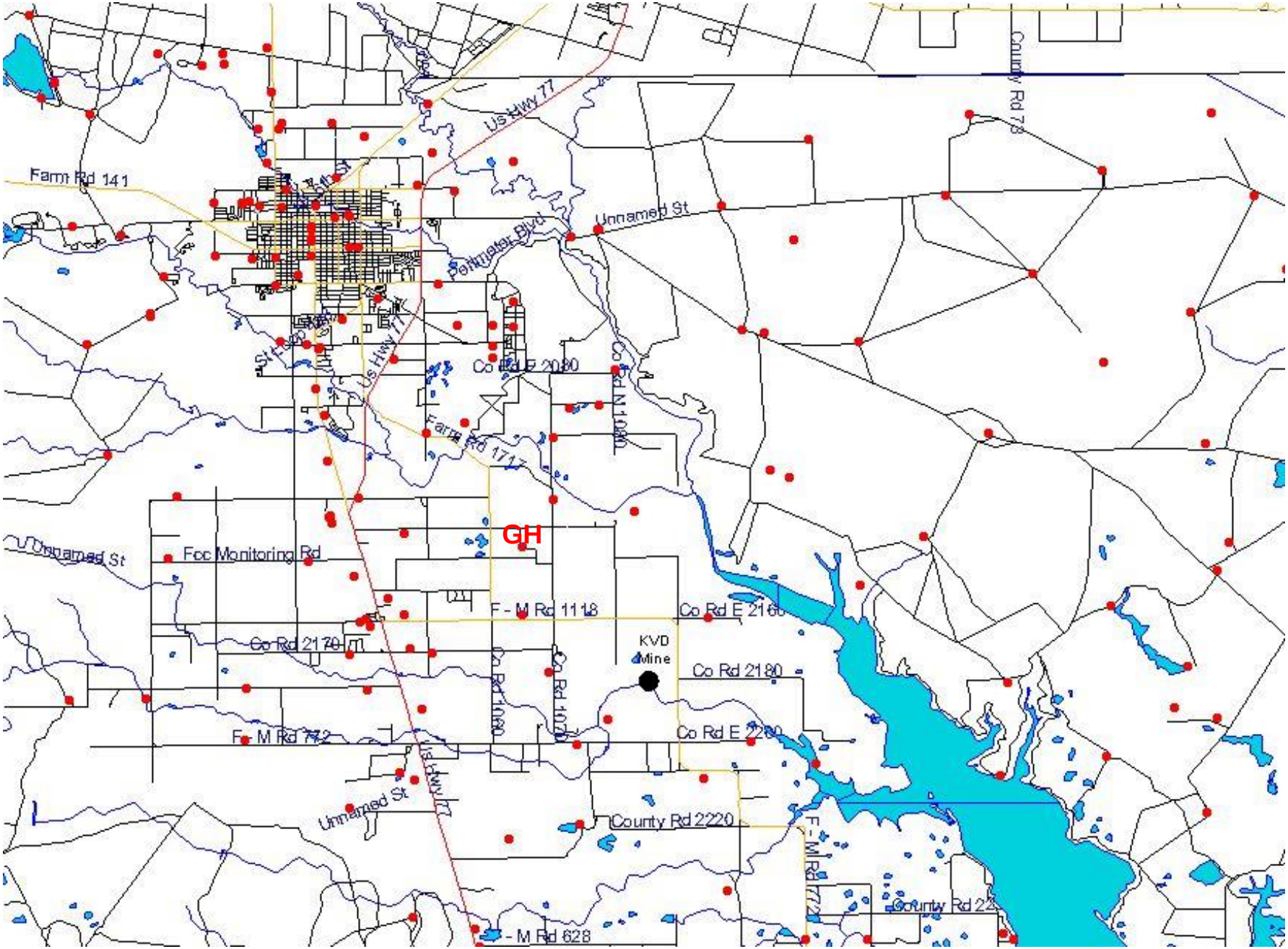
Questions on:

Surface Locations
Well Identification

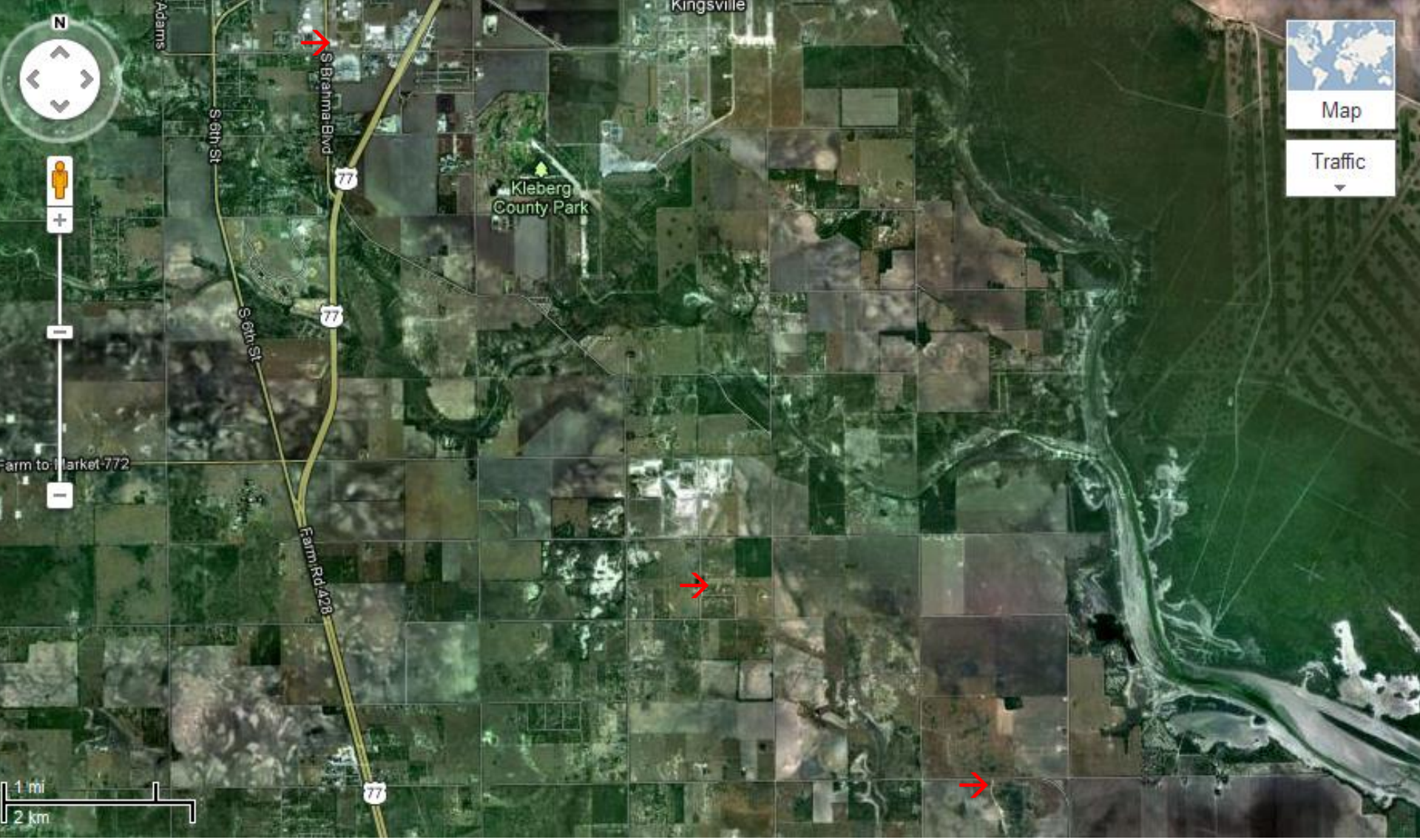
EPA, Region 6
Dallas, Texas



The red arrow points to the approximate location of the Kingsville Dome (KVD) Mining Site

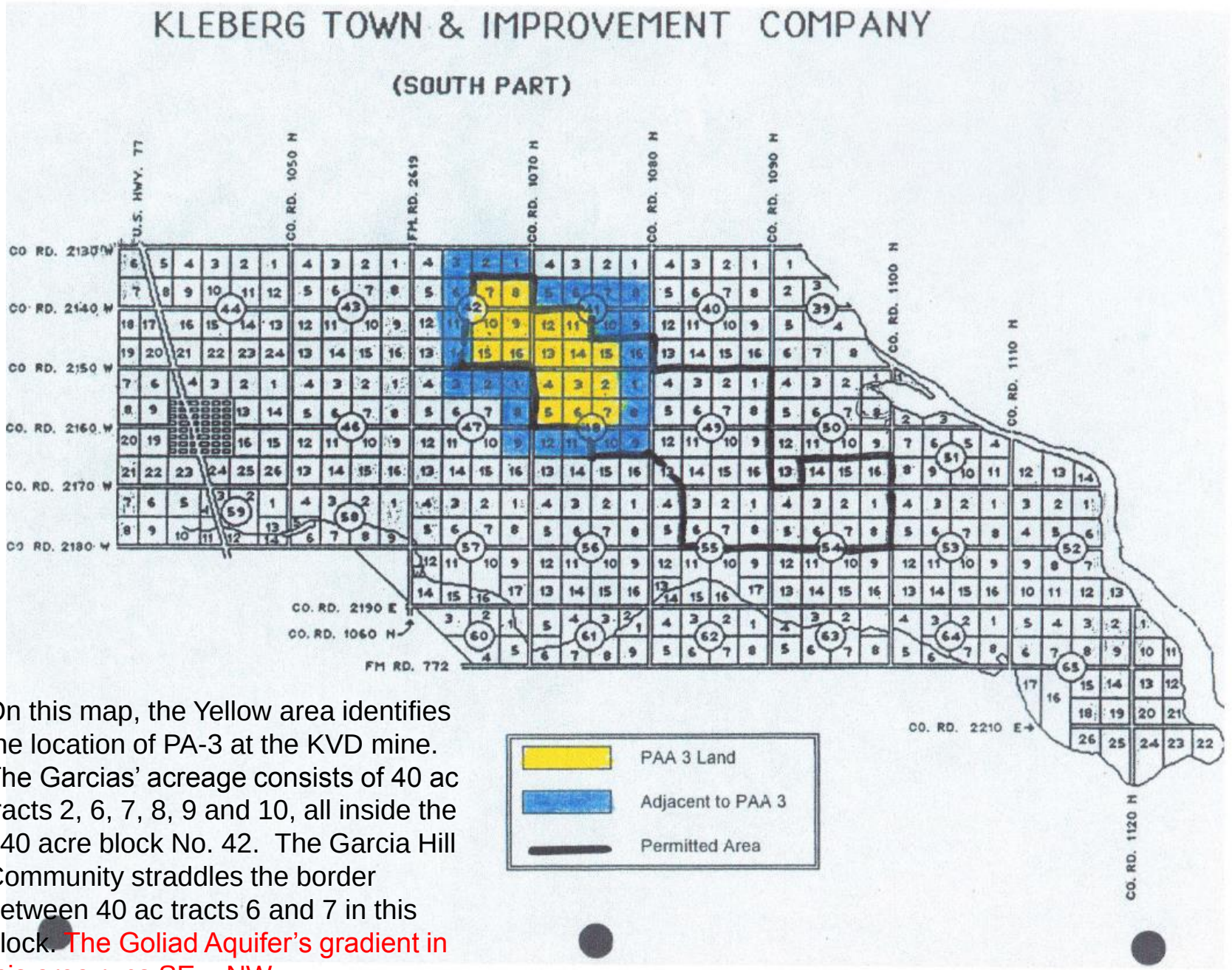


GH: Garcia Hill

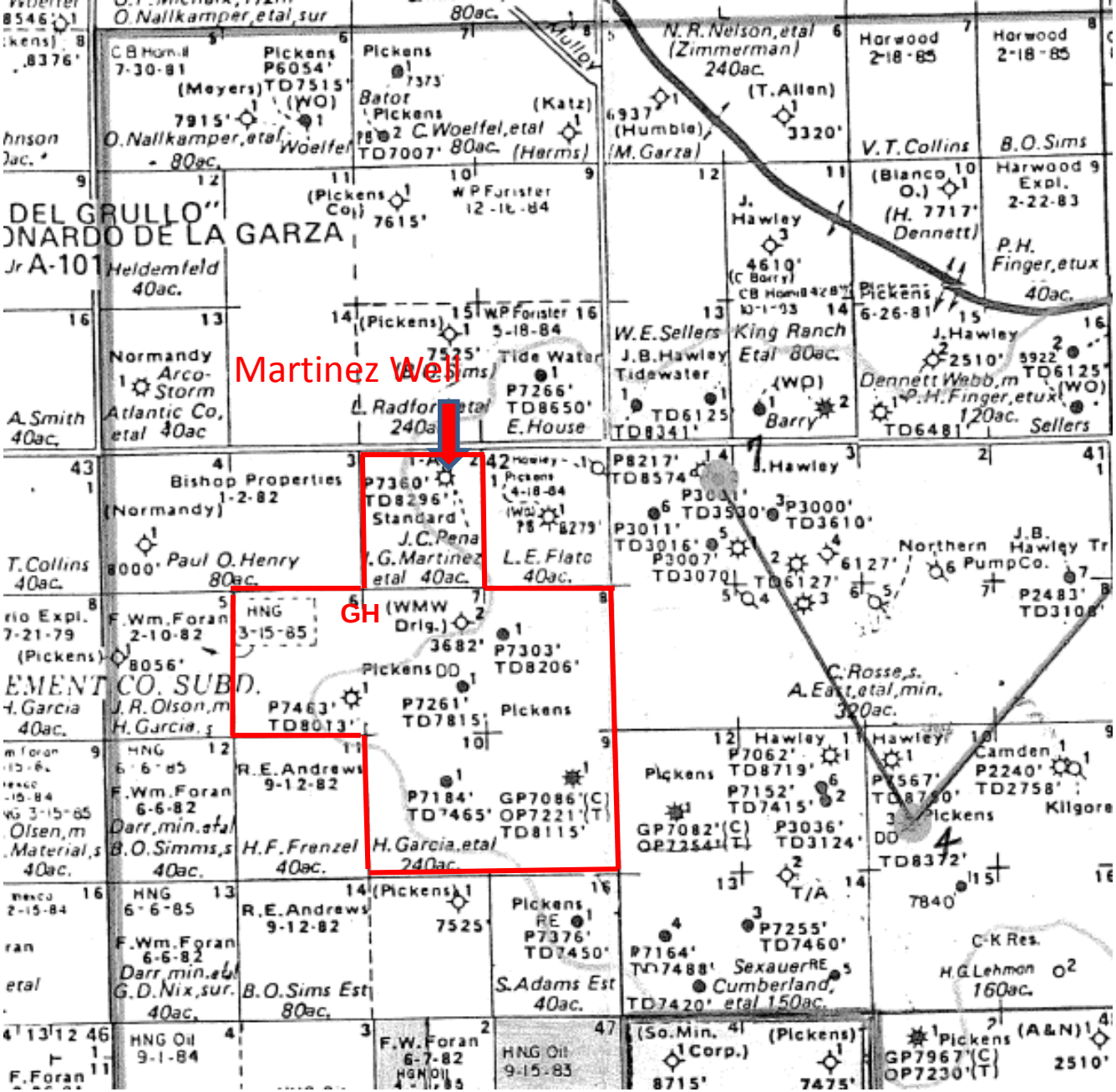


Red Arrows, top to bottom, point to EP005, GH W-24, N Border of KVD's PA-1

(Approximate Locations)



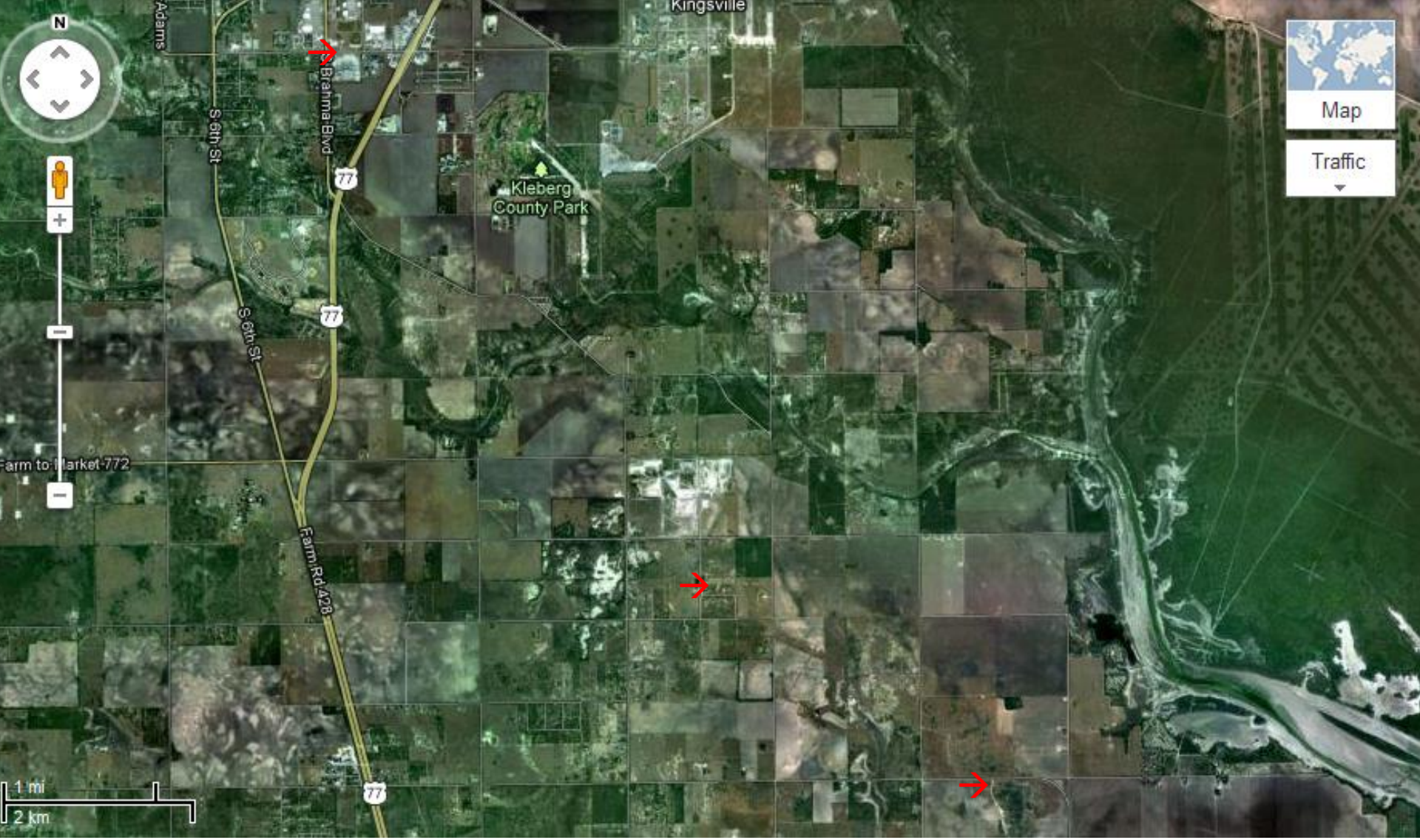
On this map, the Yellow area identifies the location of PA-3 at the KVD mine. The Garcias' acreage consists of 40 ac tracts 2, 6, 7, 8, 9 and 10, all inside the 640 acre block No. 42. The Garcia Hill Community straddles the border between 40 ac tracts 6 and 7 in this block. The Goliad Aquifer's gradient in this area runs SE – NW.


Martinez Well
CR 2130 →
CR 2140 →
GH
Garcia Acreage Outlined in Red

Garcia Hill WW-20's Wellhead as seen on July 16, 2012

Garcia Hill Well WW-24 and Produced Ground Water Gathering Station

Garcia Hill Well WW-25 - 02/11/2002



Red Arrows, top to bottom, point to EP005, GH W-24, N Border of KVD's PA-1

(Approximate Locations)

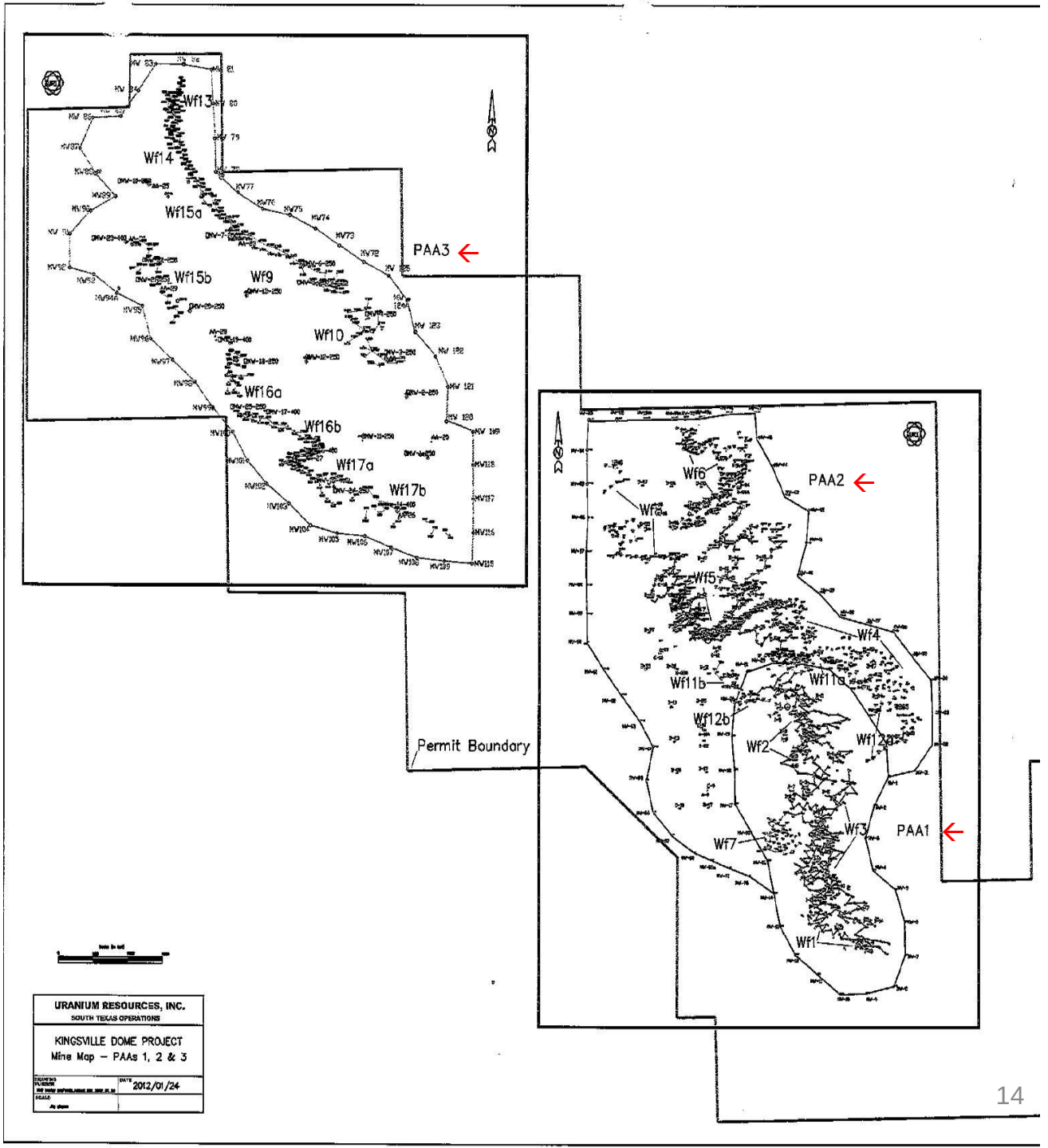
EP005's Wellhead might be inside little building (Red Arrows).

General Cavazos Blvd. appears to be FM1356

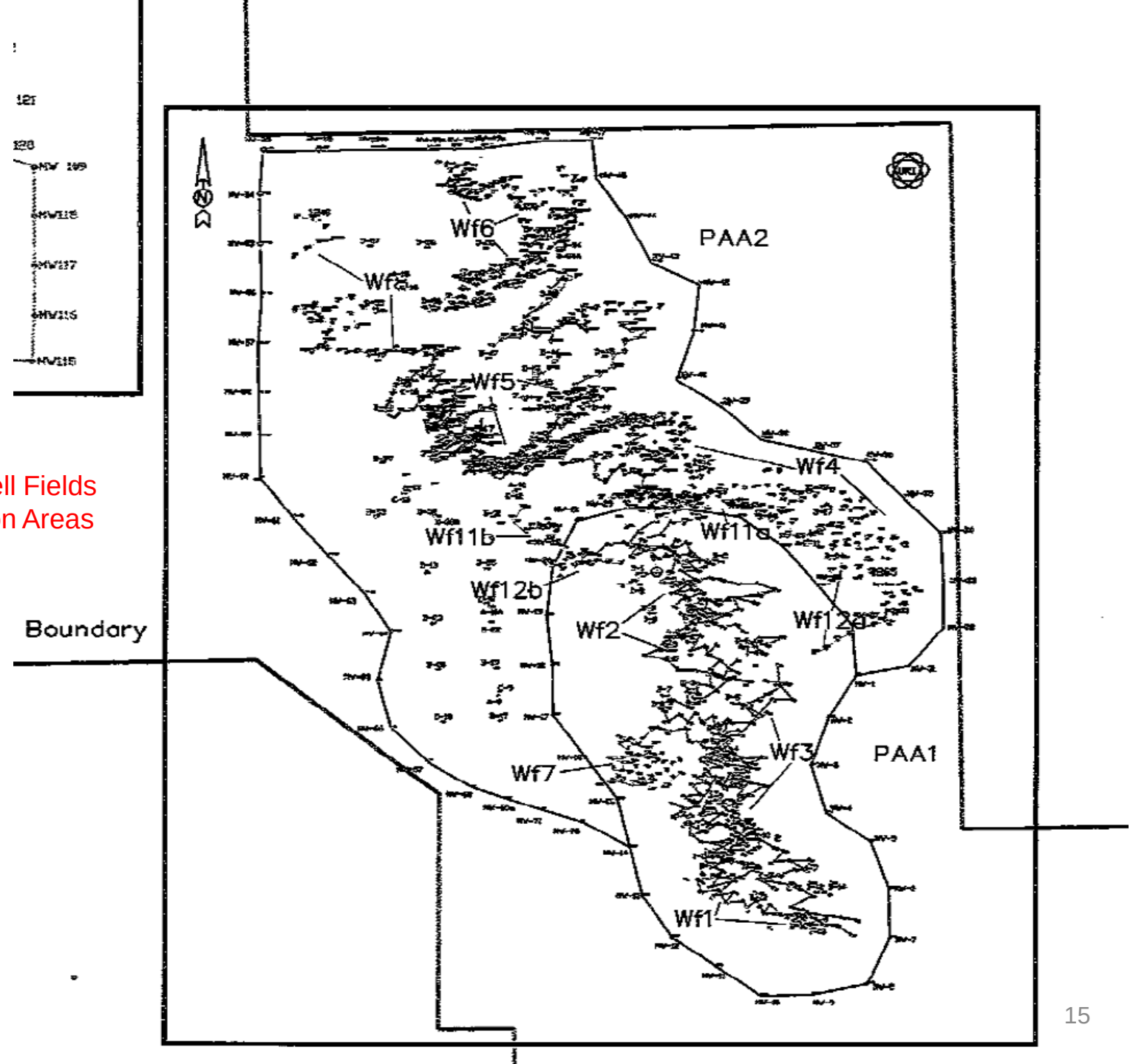
Red Arrows Point to the Wellhead of EP004

(Near the intersection of PFC Daniel Alarcon St. and W Lee Ave., Kingsville, TX)

Well Fields in Production Areas 1, 2 and 3 at KVD Uranium Mining Site



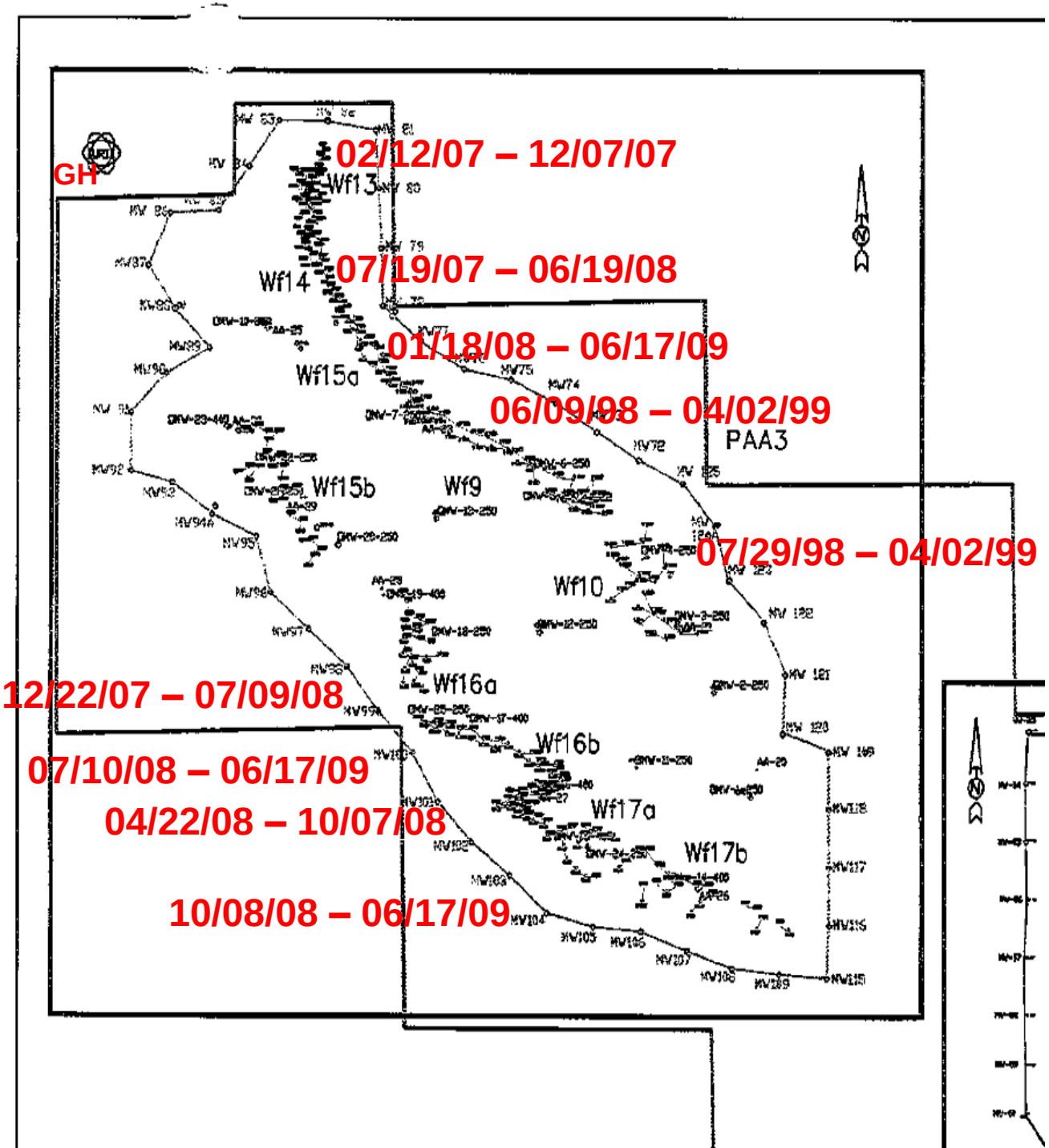
Detail of Well Fields at Production Areas 1 and 2.

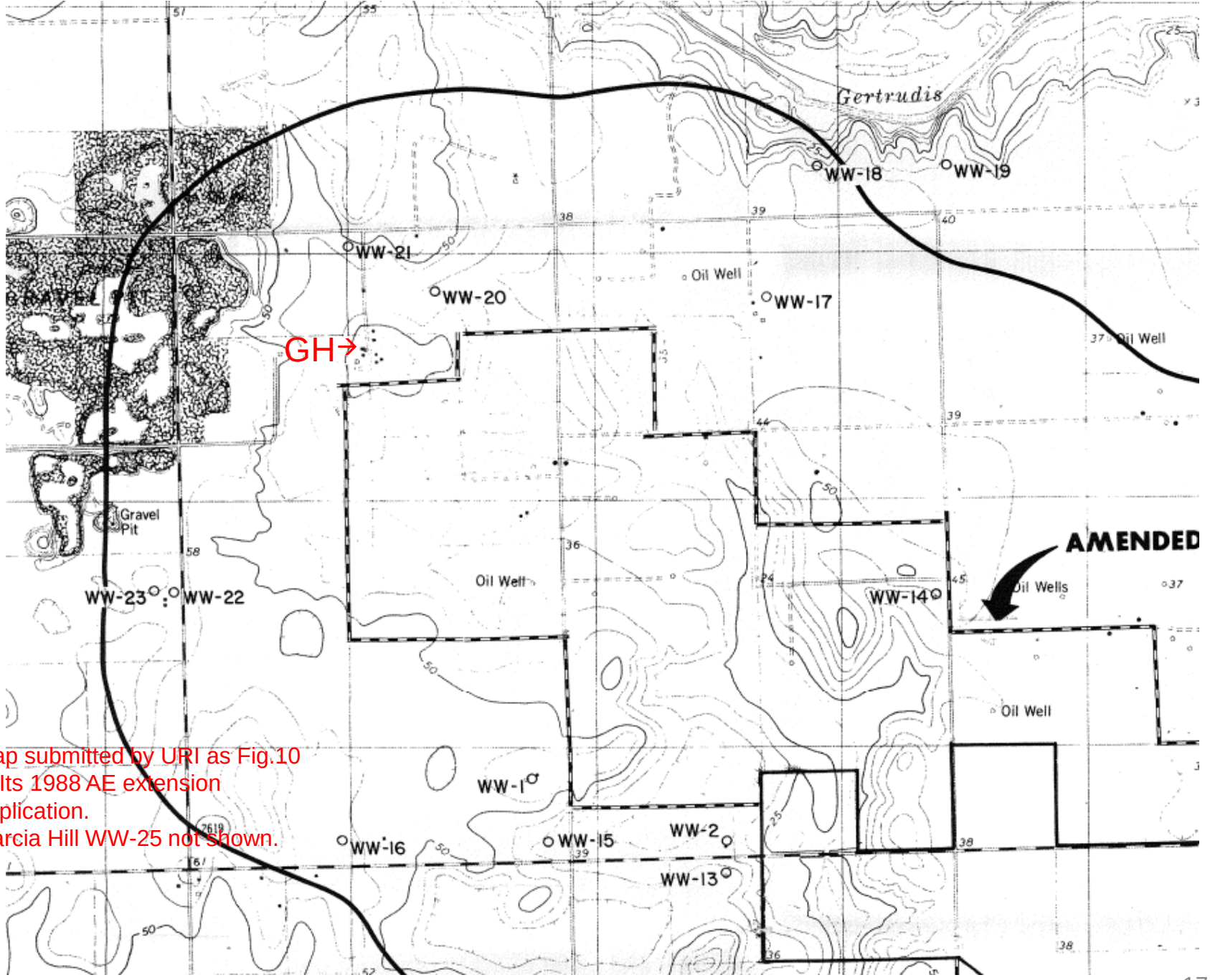


Detail of
Well Fields
At Production
Area 3.

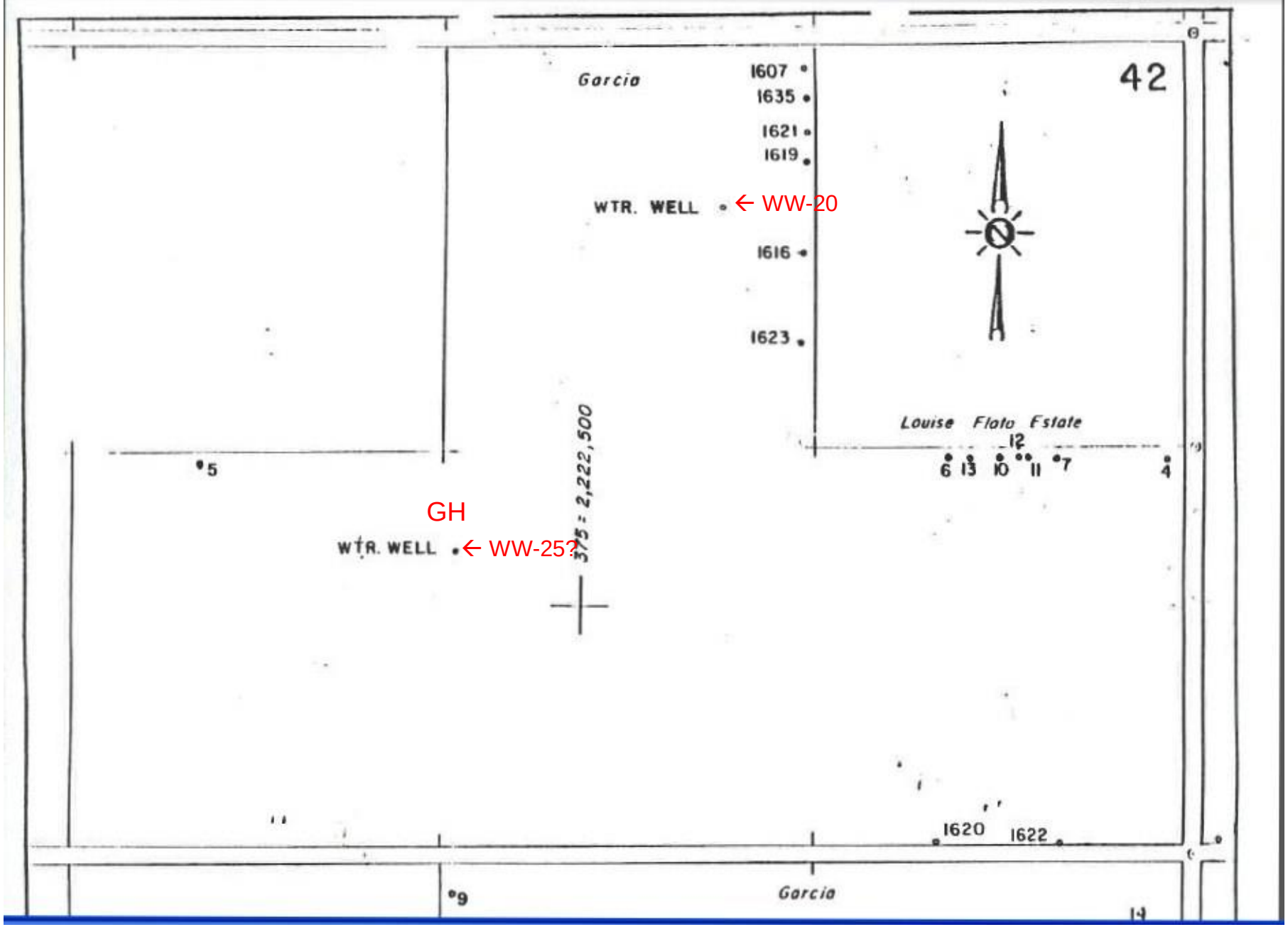
Wellfield
Periods of
Production Are
Indicated.

GH=Garcia Hill

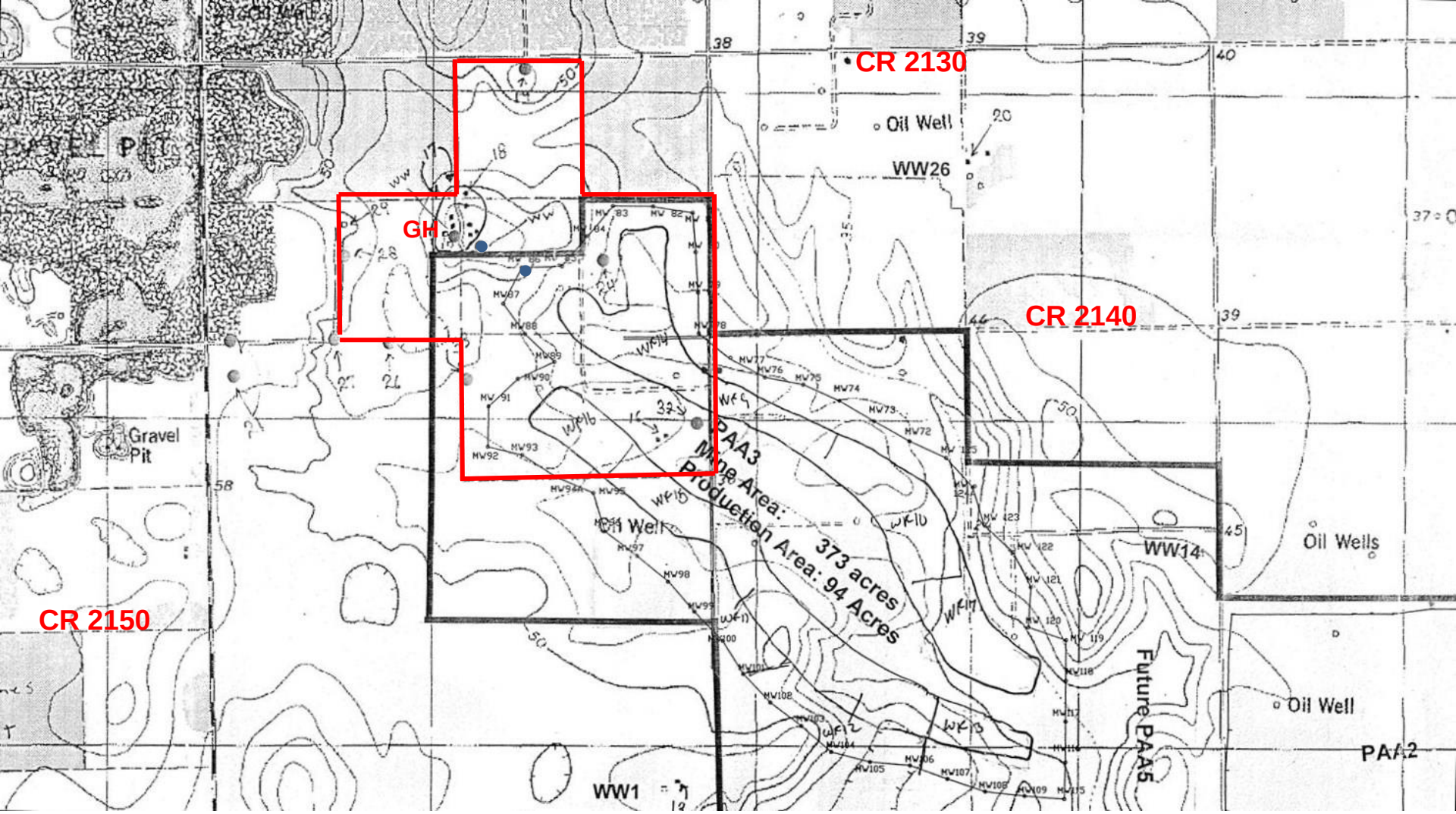




Map submitted by URI as Fig.10
In Its 1988 AE extension application.
Garcia Hill WW-25 not shown.



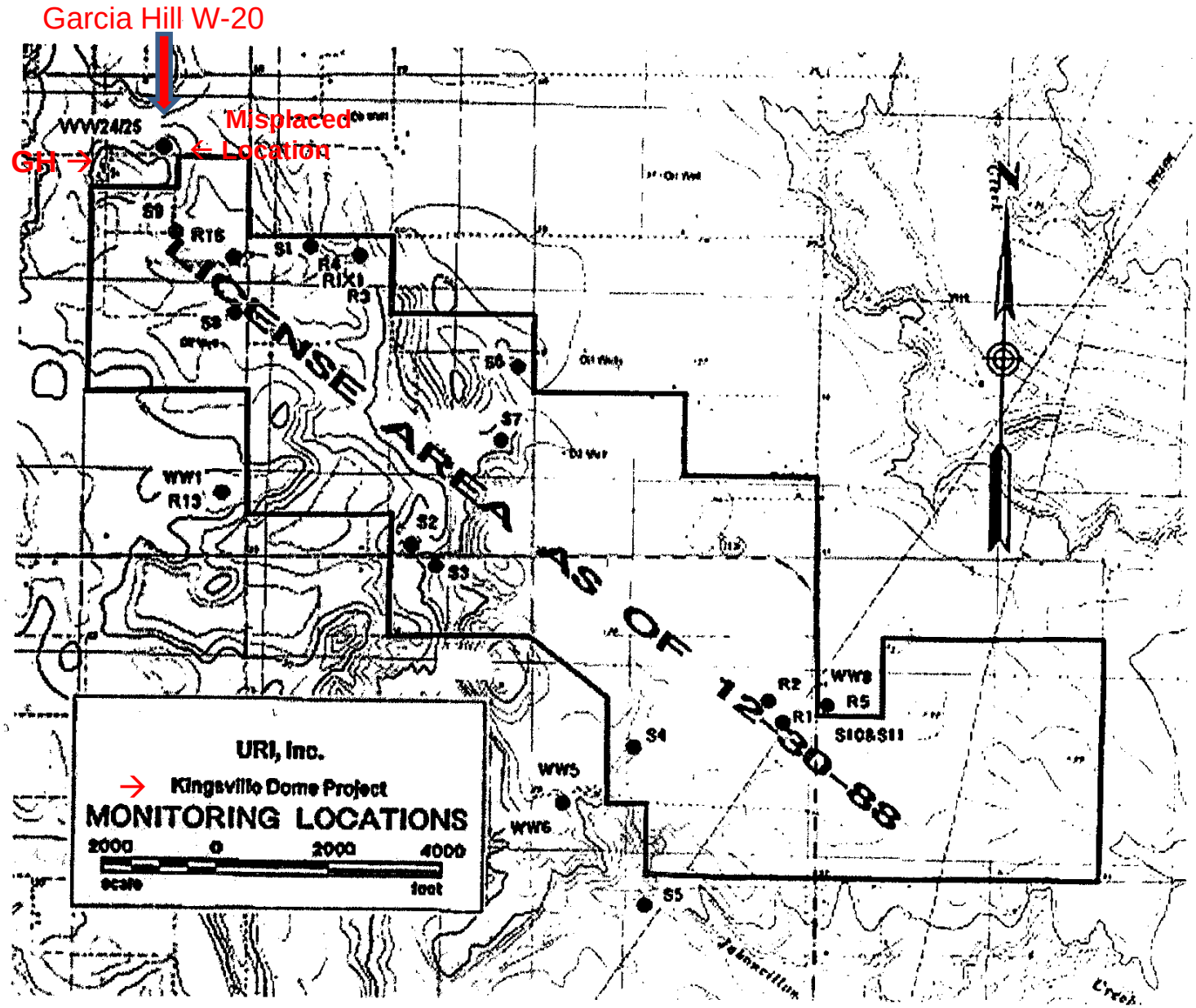
1989 Exploratory Well Plugging Affidavit Map. Presumably, WW-24 had already been drilled near WW-25. Only one water well is shown on this map adjacent to the Garcia Hill Community.



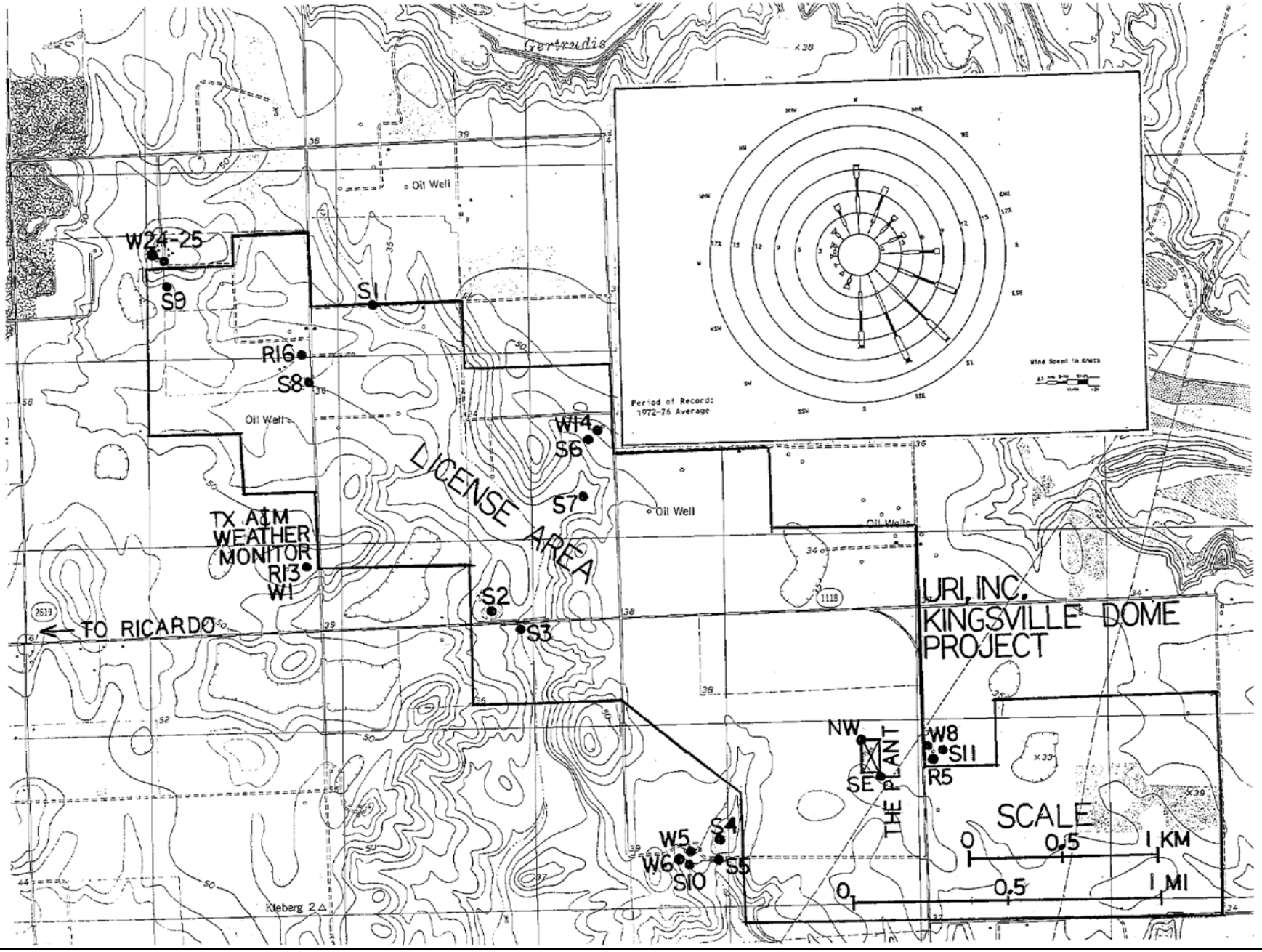
Jointly Prepared Map

(The numbers near well locations refer to sequential list of residents' names, not well IDs)

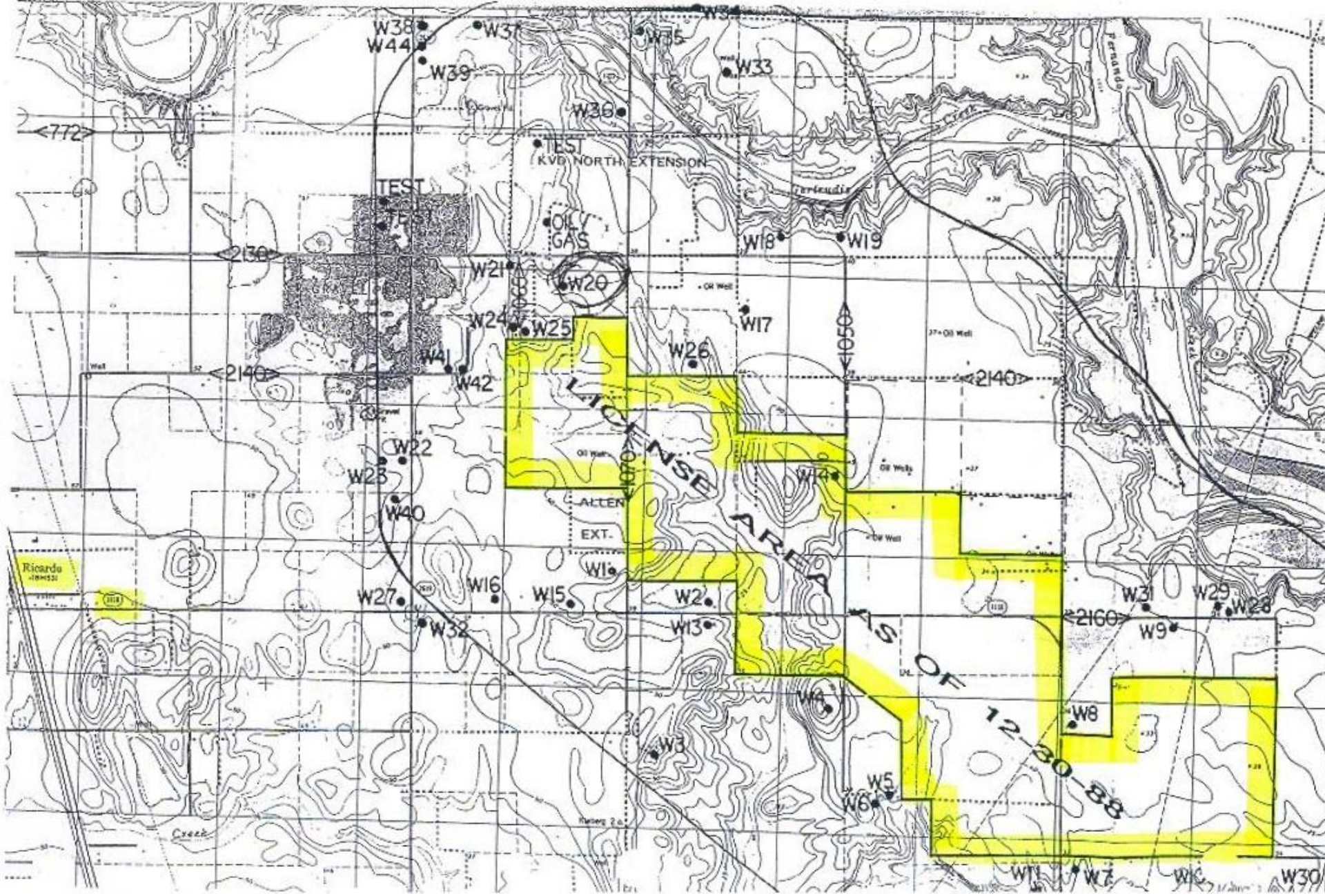
(Wells W-24 and W-25 have been spotted, but Well W-20 is not shown on map)



The locations of Garcia Hill wells W-24 and W-25 have been shown next to the location of the Garcia Hill W-20 well on this map.



1998 Environmental Monitoring Locations Map submitted to TDH. The W-20 well is missing from map.



Note: The N-S road marked as 1050 on this map is actually road1080

Based on the work of Jessica M. Garcia, the Coordinates for Well W-20 (the Martinez Well) are:

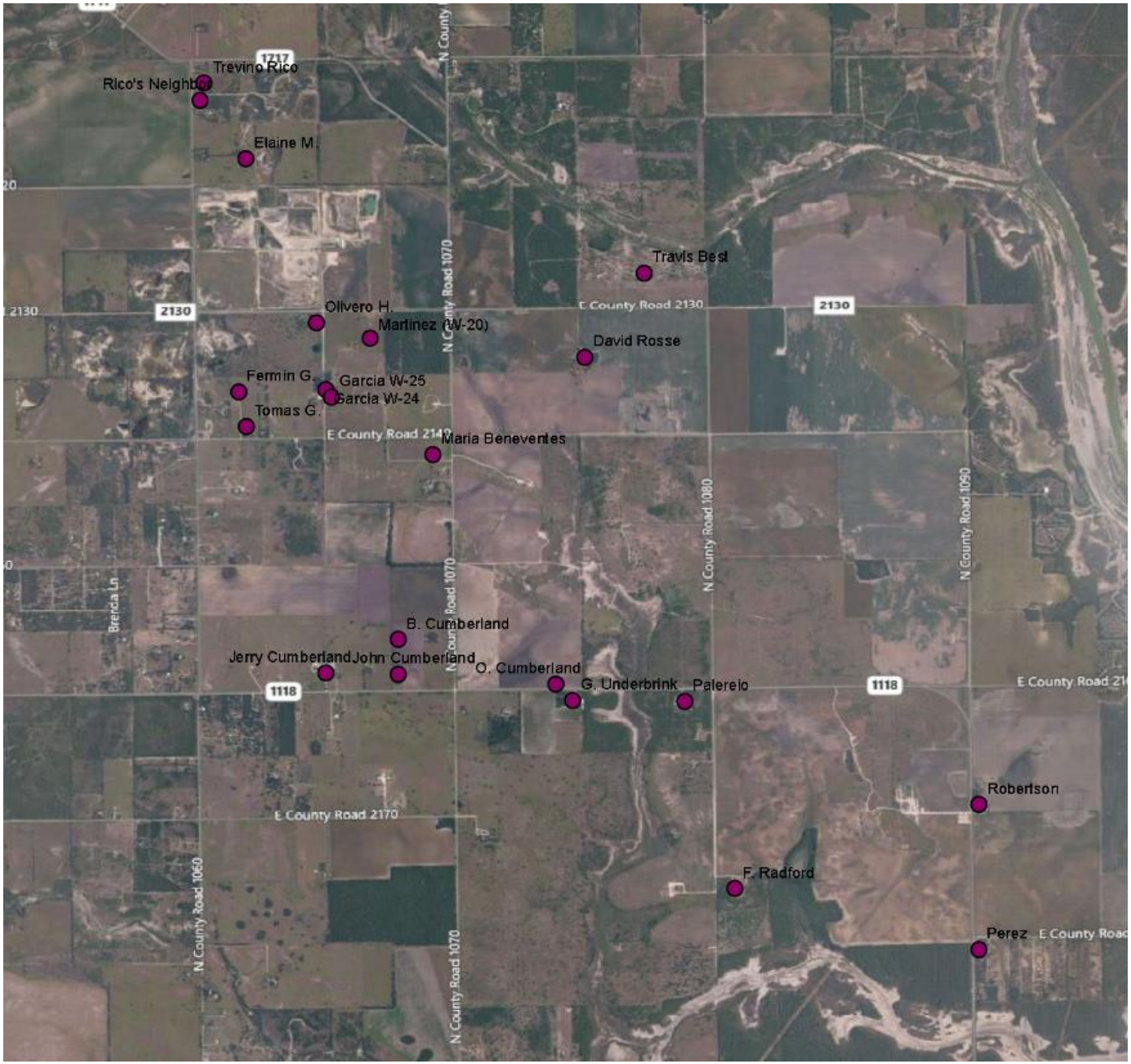
Lat: 27.44353 º
Long: 97.81285 º

Her map shows the W-20 well at the correct location.

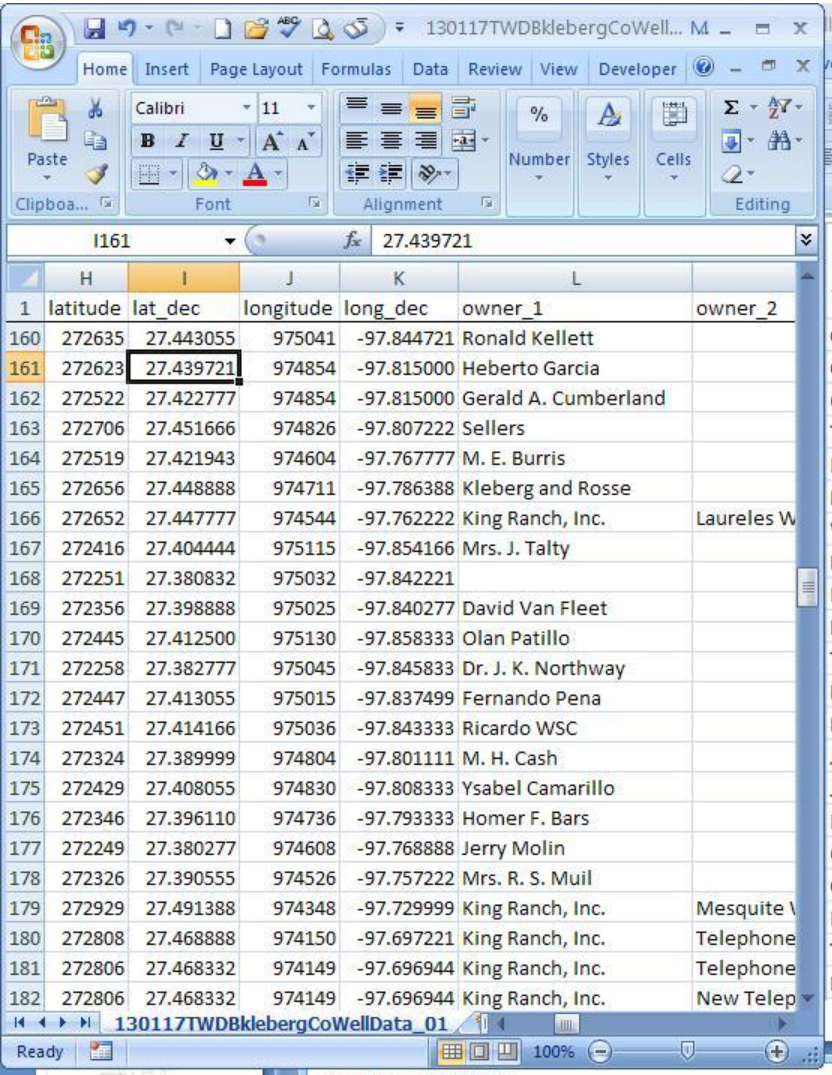
Will correct Table and next map.

Well Name	Well Map No.	Latitude	Longitude
Garcia W-24	1	27.44038	-97.81557
Garcia W-25	2	27.43993	-97.81522
Olivero H.	3	27.44448	-97.81613
Tomas G.	4	27.43812	-97.82043
Ferman G.	5	27.44025	-97.82090
Martinez (69?) (W-20)	6	~~27.43488~~	~~-97.80933~~
Well to the South	7	27.43640	-97.80900
Elaine M.	8	27.45455	-97.82047
Perez	9	27.40607	-97.77554
Robertson	10	27.41497	-97.77554
Travis Best	11	27.44753	-97.79606
David Rosse	12	27.44236	-97.79969
B. Cumberland	13	27.42508	-97.81113
John Cumberland	14	27.42295	-97.81113
Jerry Cumberland	15	27.42303	-97.81555
F. Radford	16	27.40981	-97.79050
O. Cumberland	17	27.42233	-97.80146
G. Underbrink	18	27.42135	-97.80043
Palereio	19	27.42129	-97.79357
Trevino Rico	20	27.45917	-97.82302
Rico's Neighbor	21	27.45812	-97.82326

IMPORTANT:
The labels for the W-24 and W-25 Wells have been reversed in this map



Domestic Water Supply Wells of Interest around the Kingsville Dome Uranium Mine



	H	I	J	K	L	
1	latitude	lat_dec	longitude	long_dec	owner_1	owner_2
160	272635	27.443055	975041	-97.844721	Ronald Kellett	
161	272623	27.439721	974854	-97.815000	Heberto Garcia	
162	272522	27.422777	974854	-97.815000	Gerald A. Cumberland	
163	272706	27.451666	974826	-97.807222	Sellers	
164	272519	27.421943	974604	-97.767777	M. E. Burris	
165	272656	27.448888	974711	-97.786388	Kleberg and Rosse	
166	272652	27.447777	974544	-97.762222	King Ranch, Inc.	Laureles W
167	272416	27.404444	975115	-97.854166	Mrs. J. Talty	
168	272251	27.380832	975032	-97.842221		
169	272356	27.398888	975025	-97.840277	David Van Fleet	
170	272445	27.412500	975130	-97.858333	Olan Patillo	
171	272258	27.382777	975045	-97.845833	Dr. J. K. Northway	
172	272447	27.413055	975015	-97.837499	Fernando Pena	
173	272451	27.414166	975036	-97.843333	Ricardo WSC	
174	272324	27.389999	974804	-97.801111	M. H. Cash	
175	272429	27.408055	974830	-97.808333	Ysabel Camarillo	
176	272346	27.396110	974736	-97.793333	Homer F. Bars	
177	272249	27.380277	974608	-97.768888	Jerry Molin	
178	272326	27.390555	974526	-97.757222	Mrs. R. S. Muil	
179	272929	27.491388	974348	-97.729999	King Ranch, Inc.	Mesquite V
180	272808	27.468888	974150	-97.697221	King Ranch, Inc.	Telephone
181	272806	27.468332	974149	-97.696944	King Ranch, Inc.	Telephone
182	272806	27.468332	974149	-97.696944	King Ranch, Inc.	New Telep

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← Mr. Saenz Coordinates

The TWDB's and Mr. Saenz's Coordinates for GH well W-25 compare very well.

Garcia Hill area Monitor/Water Well Locations per Jessica Garcia's Map
GPS Coordinates.

Monitor Well Designations

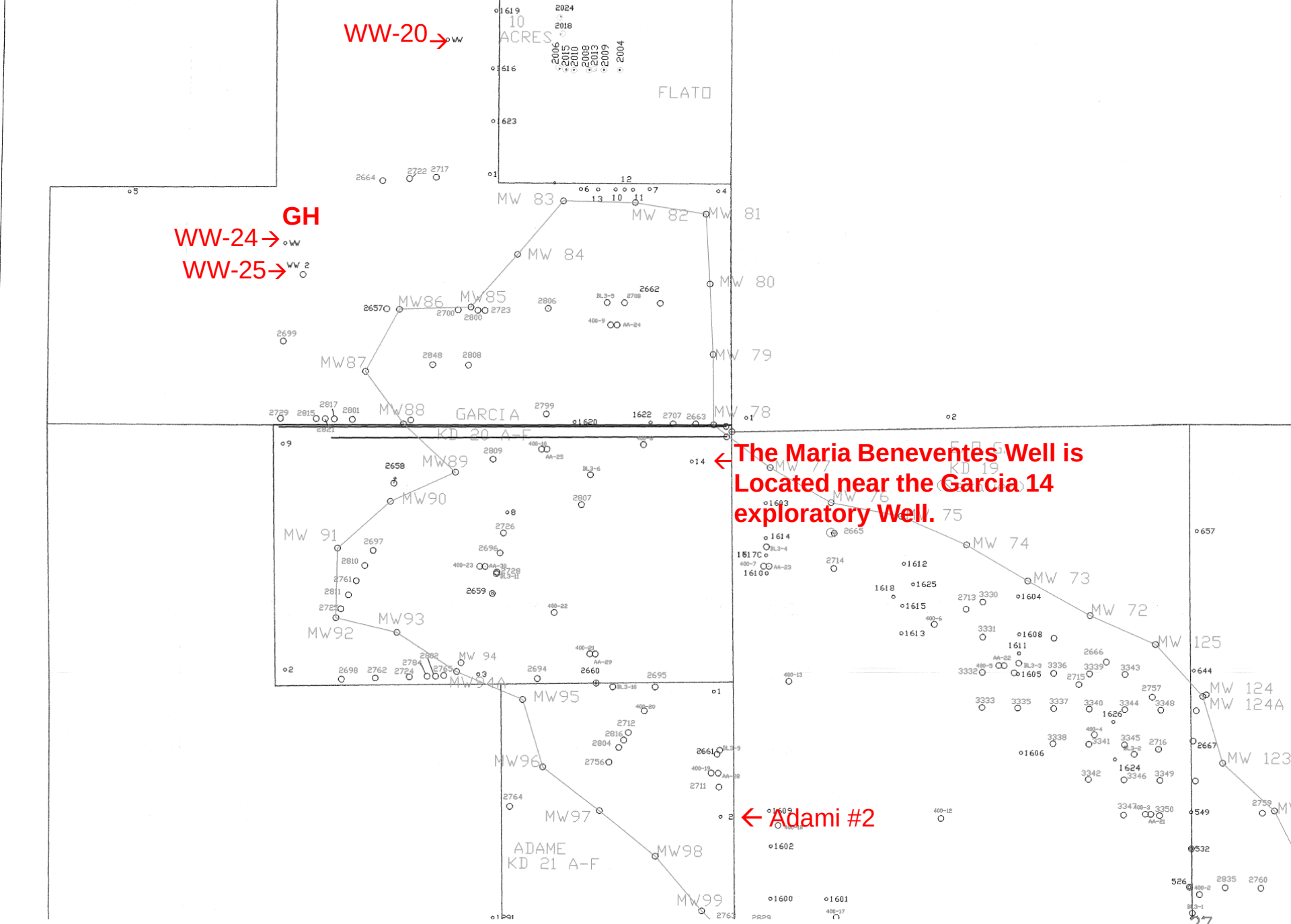
ID	Well Name	Coordinates
M1	MW81	N 27°26.454', W97°48.497'
M2	MW82	N 27°26.462', W97°48.572'
M3	MW83	N 27°26.464', W97°48.646'
M4	MW84	N 27°26.415', W97°48.693'
M5	MW85	N 27°26.364', W97°48.74'
M6	MW86	N 27°26.364', W97°48.814'
M7	MW87	N 27°26.301', W97°48.844'
M8	MW88	N 27°26.257', W97°48.808'
M9	MW89	N 27° 26.208, W97°48.755'
M10	MW90	N 27°26.181', W97°48.821'
M11	MW91	N 27°26.117', W97°48.859'
M12	MW92	N 27°26.071', W97°48.877'
M13	MW93	N 27°26.058', W97°48.813'
M14	MW94	N 27°26.02D', W97°48.752'
M15	AA30	N 27°26.12D', W97°48.72B'
M16	OMW23	N 27°26.12D', W97°48.72B'

Storage Tank Designation

ID	Name	Coordinates
S	Garcia Hill Storage Tank	N 27°26.412', W97°48.94'

Water Well Designations

ID	Well Name	Coordinates
W1	Main Well Garcia Hill (plugged)	N 27° 26.421', W97°48.94
W2	WW24	N 27°26.423', W97°48.934'
W3	WW25 (shut in)	N 27°26.396', W97°48.913'
W4	Benaventes Well (capped)	N 27°26.185', W97°48.54'
W5	Travis Best	N 27°26'51.11", W97°47'45.81"
W6	Byron Cumberland	N 27°25'30.27", W97°48'40.07"
W7	Jerry Cumberland	N 27°25'22.92", W97°48'55.98"
W8	John Cumberland	N 27°25'22.63", W97°48'40.07"
W9	Oletha Cumberland	N 27°25'20.37", W97°48'5.24"
W10	Ferman Garza	N 27°26.415', W97°49.254'
W11	Tomas Garza	N 27°26.287', W97°49.226'
W12	Olivero Hinojosa	N 27°26.669', W97°48.968'
W13	WW20, the Martinez Well (shut in)	N 27°26.612', W97°48.771'
W14	Elaine Menn	N 27°27.273', W97°49.228'
W15	Palereio Household	N 27°25'16.65", W97°47'36.85"
W16	Perez Family	N 27°24'21.86", W97°46'31.95"
W17	Fred Radford	N 27°24'35.33", W97°47'25.79"
W18	Rico's Neighbor	N 27°27'29.24", W97°49'23.74"
W19	Rico Trevino	N 27°27'33.02", W97°49'22.86"
W20	Robertson Household	N 27°24'53.89", W97°46'31.95"
W21	David Rosse	N 27°26'3.25", W97°47'58.87"
W22	Gary Underbrink	N 27°25'16.87", W97°48'1.55"

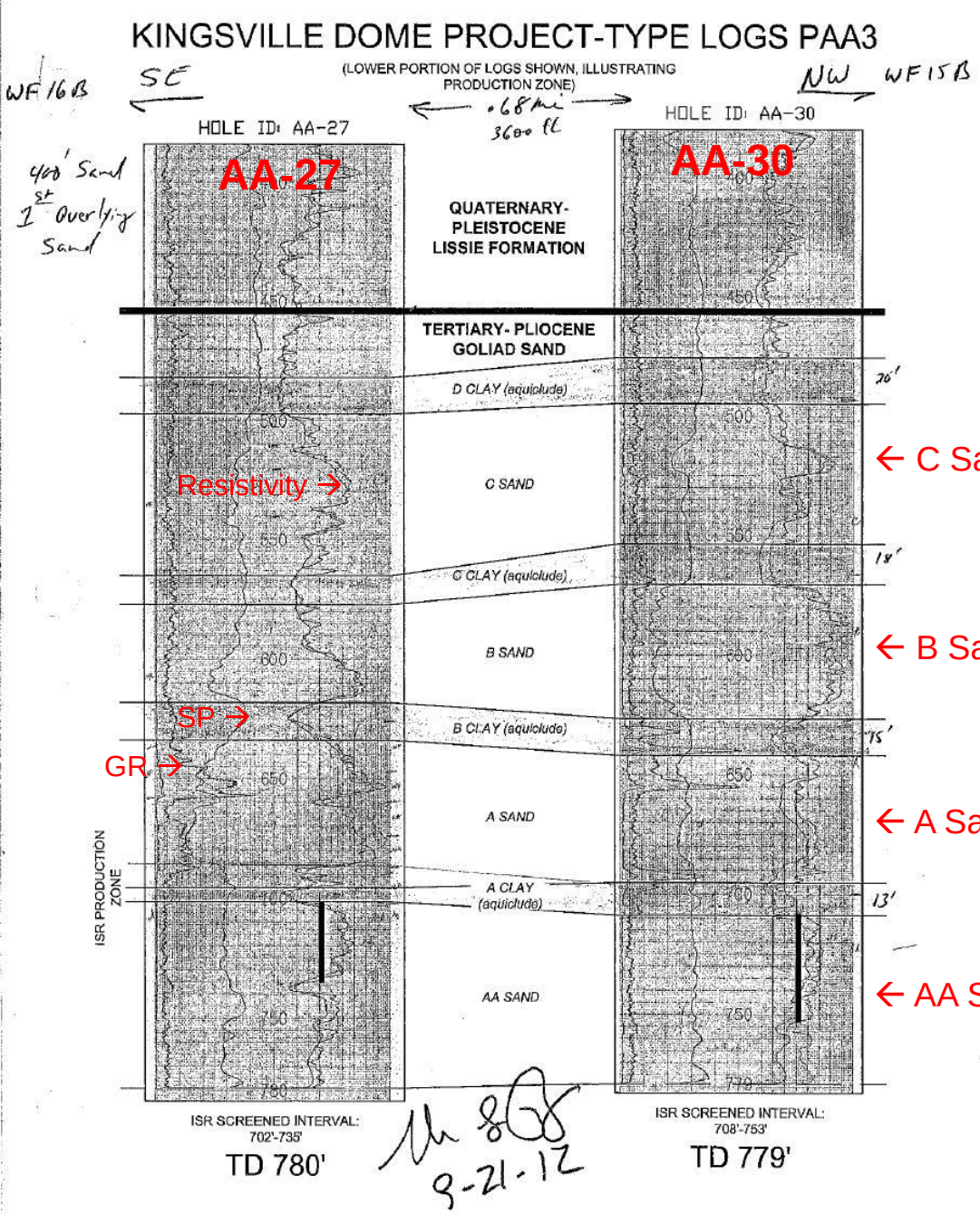

WW-20
GH
WW-24
WW-25
The Maria Beneventes Well is Located near the Garcia 14 exploratory Well.
Adami #2
MW 83
MW 82
MW 81
MW 84
MW 80
MW86
MW85
MW87
MW 79
MW88
GARCIA
MW 78
KD 20 A-F
MW89
MW90
MW 91
MW93
MW92
MW 94
MW94A
MW95
MW96
MW97
ADAME
KD 21 A-F
MW98
MW99
MW 77
KD 19
MW 76
MW 75
MW 74
MW 73
MW 72
MW 125
MW 124
MW 124A
MW 123
FLATO
10 ACRES

QUESTIONS ON:

Lithology
Log Evaluation
Water Quality
Monitoring

EPA, Region 6
Dallas, Texas

FIGURE 22.



Are the AA-## Wells WQ Monitoring Wells for the underlying zones?.

Operator's Zones ID:

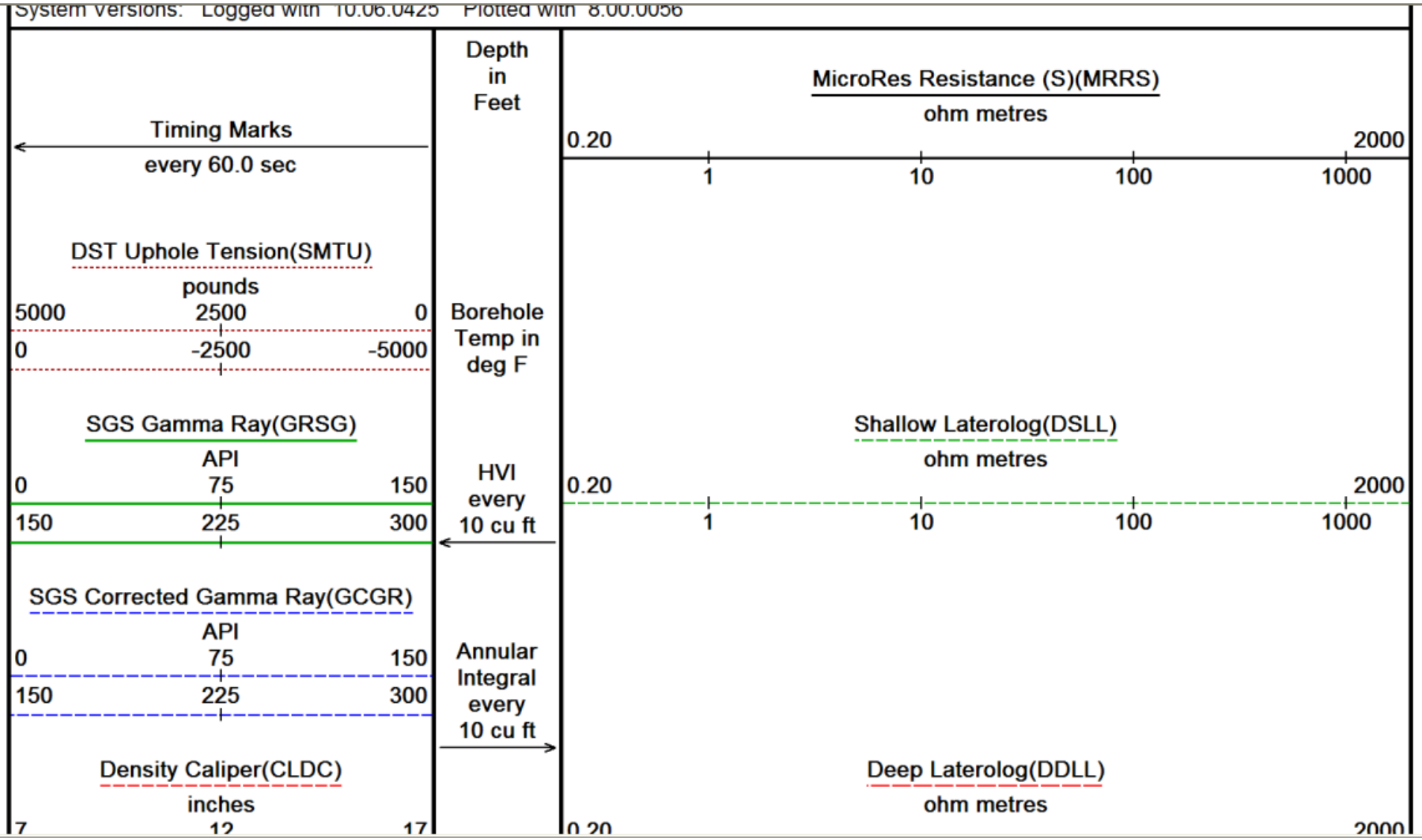
← C Sand: Overlying WQ Monitoring Zone?

← B Sand

← A Sand

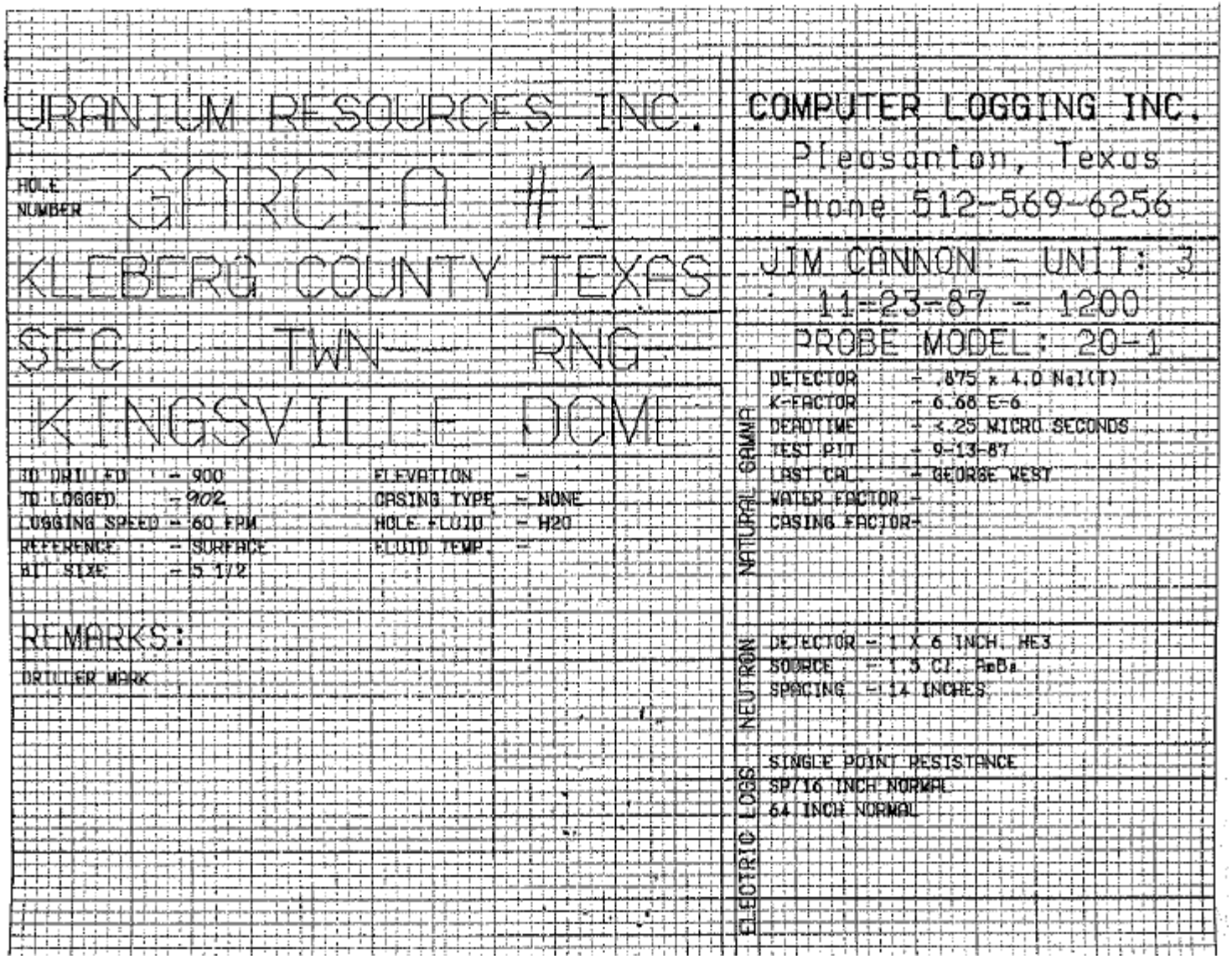
← AA Sand: Underlying WQ Monitoring Zone?

Logs provide no Scales for GR, SP or Resistivity Curves…



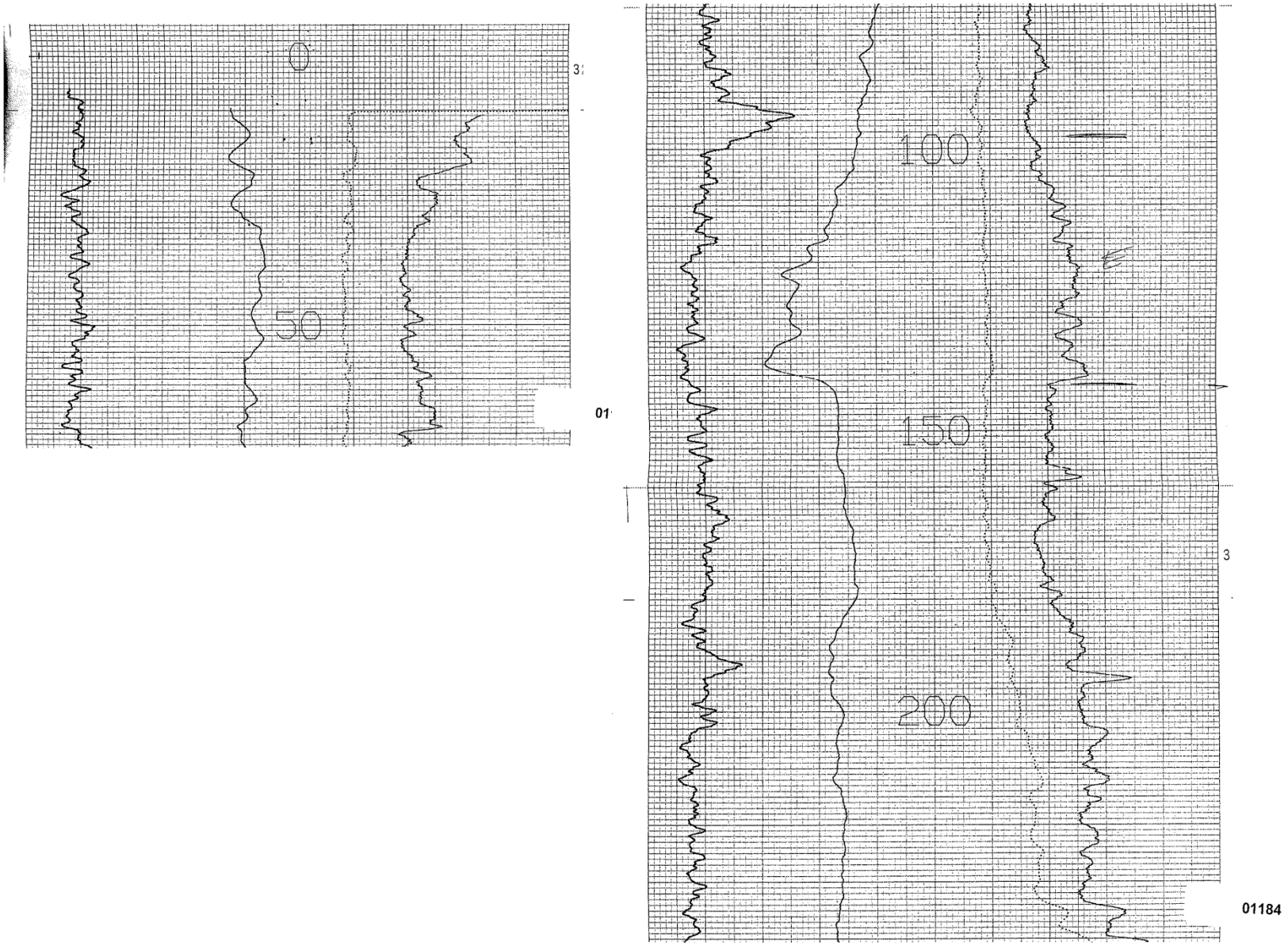
Scales in the Header of a 2009 Resistivity – GR Log. GR Readings Are Expressed in API Units.

Need to investigate conversion of API Units to Counts Per Second (CPS).

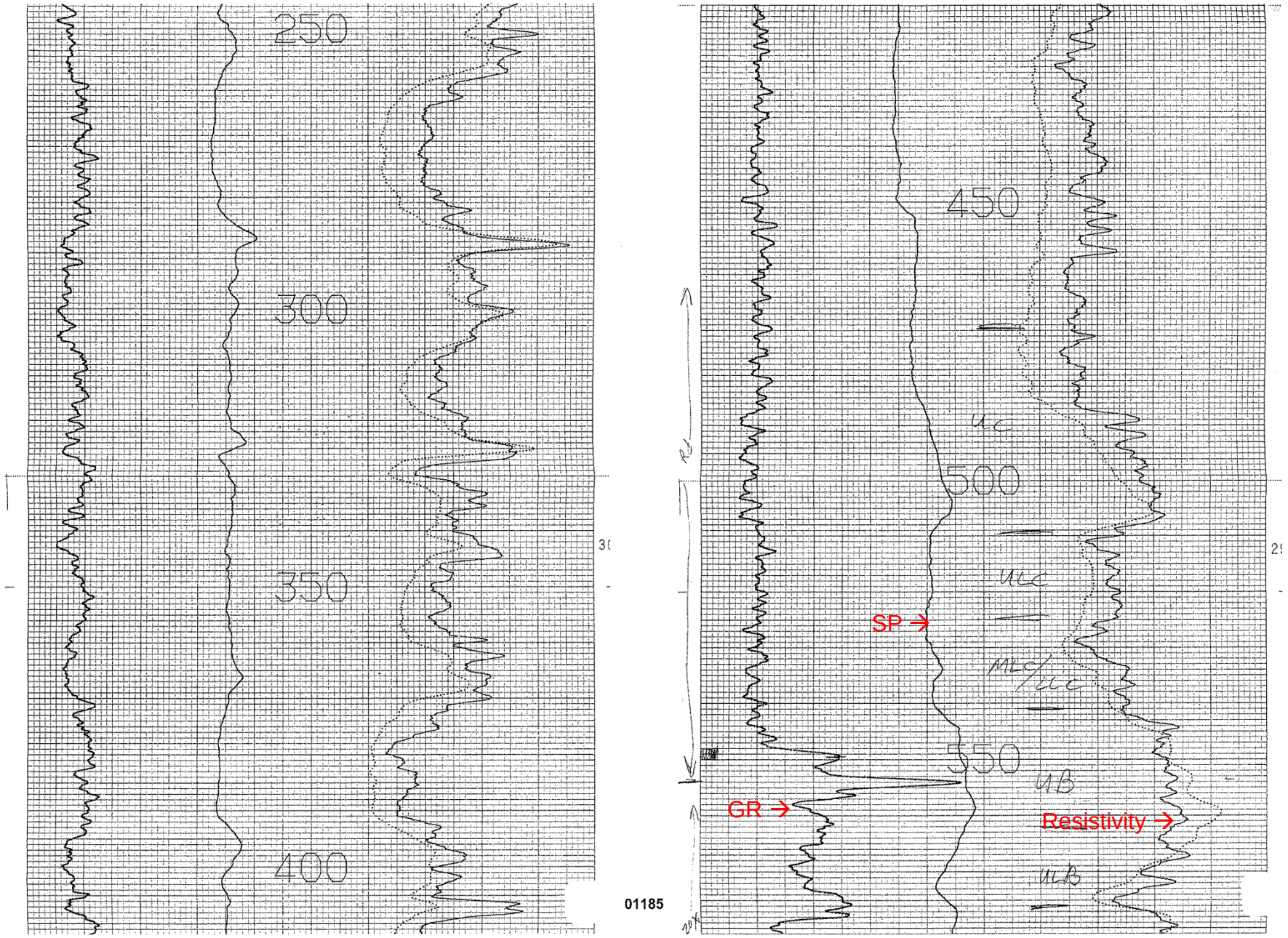


Sample Well Log Header - Exploratory Well Garcia No. 1

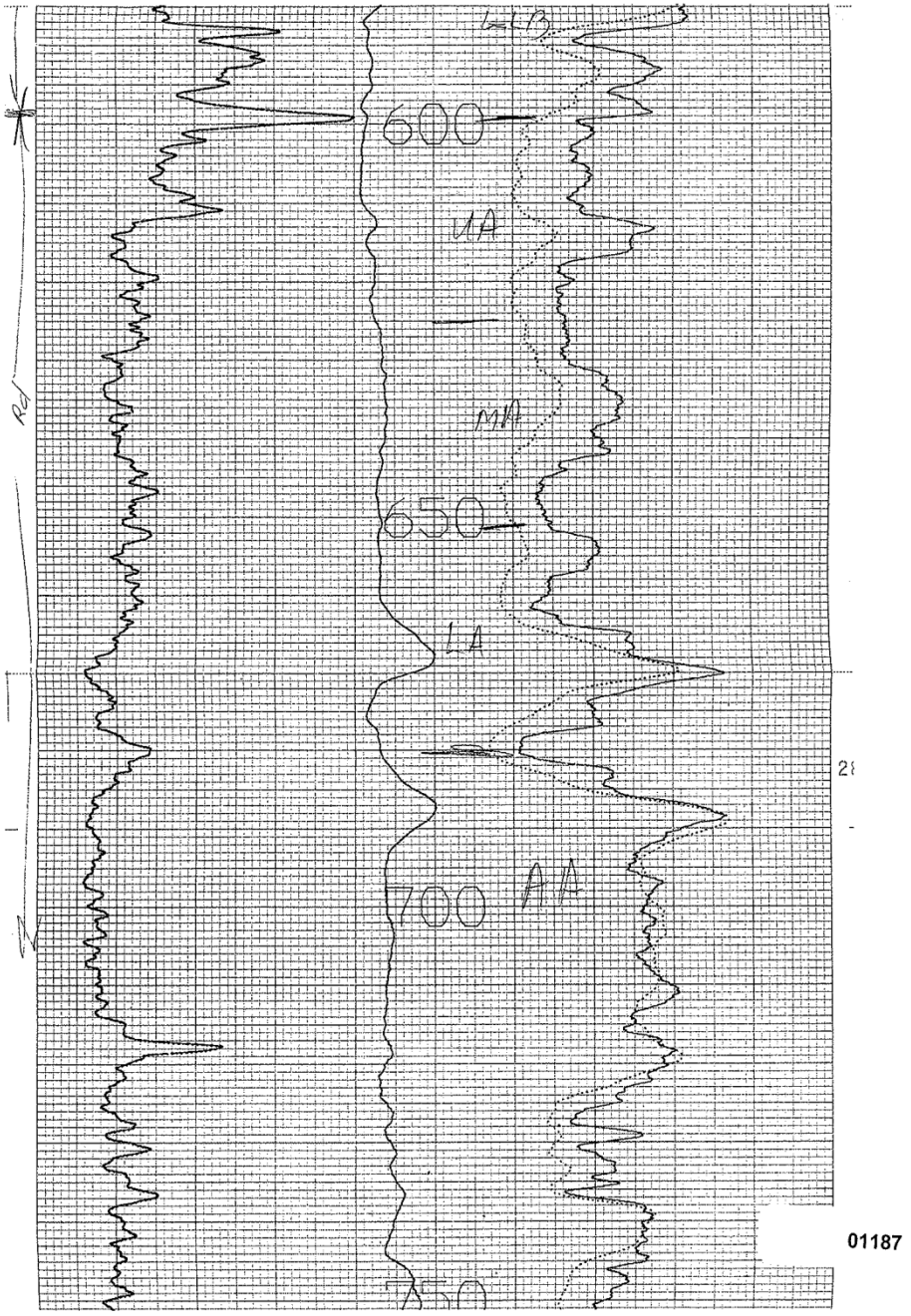
Log provides no Scales for GR, SP or Resistivity Curves…



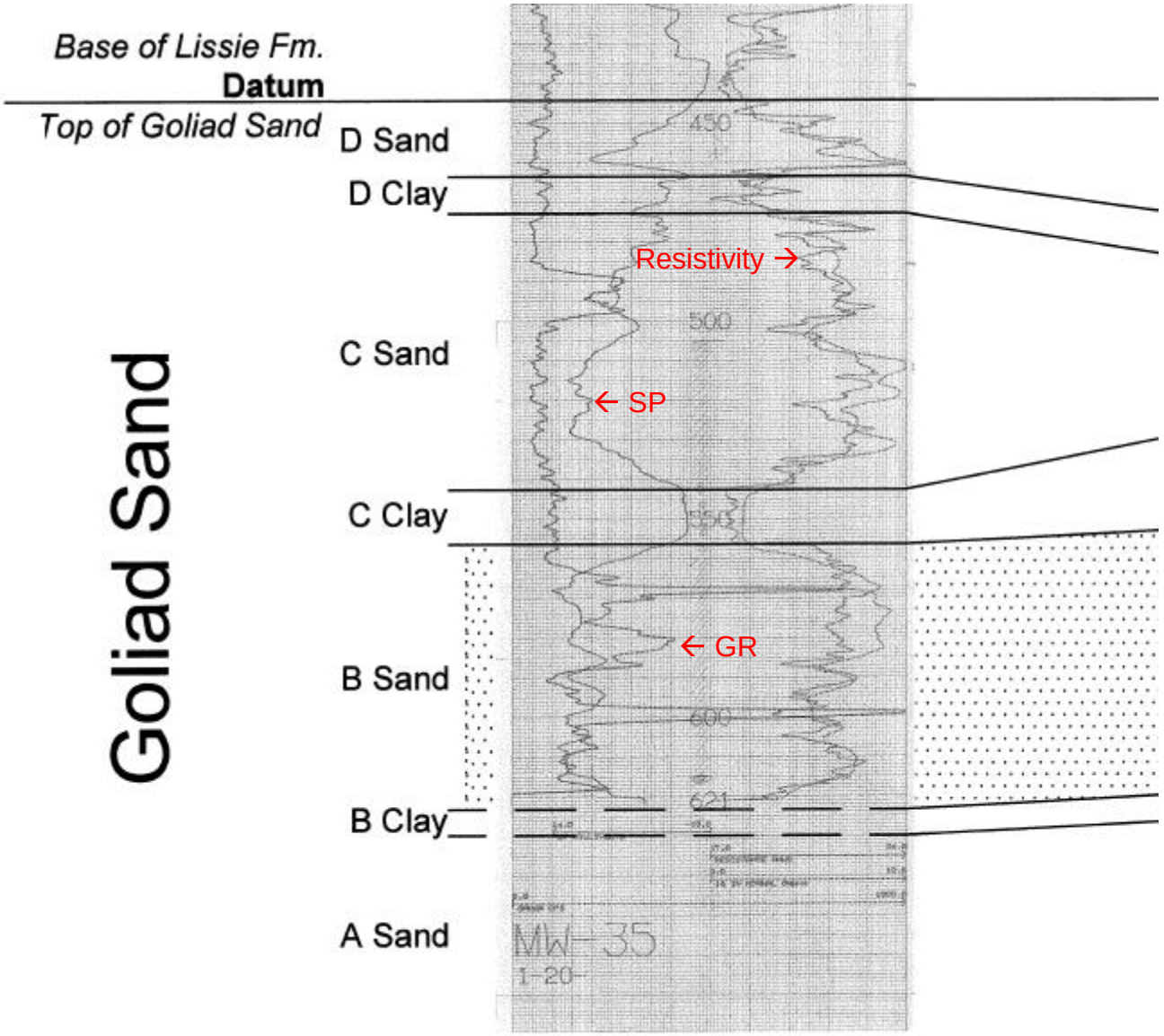
Exploratory Well Garcia No. 1



Exploratory Well Garcia No. 1



Exploratory Well Garcia No. 1



Monitoring Well (MW) Type Log

COMPUTER LOGGING INCORPORATED

URANIUM DATA ANALYSIS

CLIENT: U.R.I.
HOLE NO: ADAMI#2
DATE: 12-07-87←

K-FACTOR= .00000630 DEADTIME (MICROSEC.)= .00000025
CORRECTION FACTOR= 1.150

DEPTH (FT)	RAW CPS	CORRECTED CPS	GRADE %U3O8	CUT #1 .020	CUT #2 .050	CUT #3 .080	CUT #4 .100
662.0	194.	194.	.003				
662.5	223.	223.	.003				
663.0	266.	266.	.004				
663.5	353.	353.	.005				
664.0	638.	638.	.009				
664.5	1170.	1171.	.017				
665.0	1649.	1650.	.024	.024			
665.5	1809.	1810.	.026	.026			
666.0	1686.	1686.	.024	.024			
666.5	1618.	1619.	.023	.023			
667.0	1789.	1790.	.026	.026			
667.5	2255.	2257.	.033	.033			
668.0	2321.	2322.	.034	.034			
668.5	1692.	1692.	.025	.025			
669.0	999.	999.	.014				
669.5	603.	604.	.009				
670.0	467.	467.	.007				
670.5	397.	397.	.006				

CUTOFF NUMBER 1
NUMBER OF HALF-FOOT INTERVALS: 8
AVERAGE GRADE= .027
GRADE-THICKNESS PRODUCT= . .107

Where is the Adami #2 located?.

Is a GR Log available for this well?.

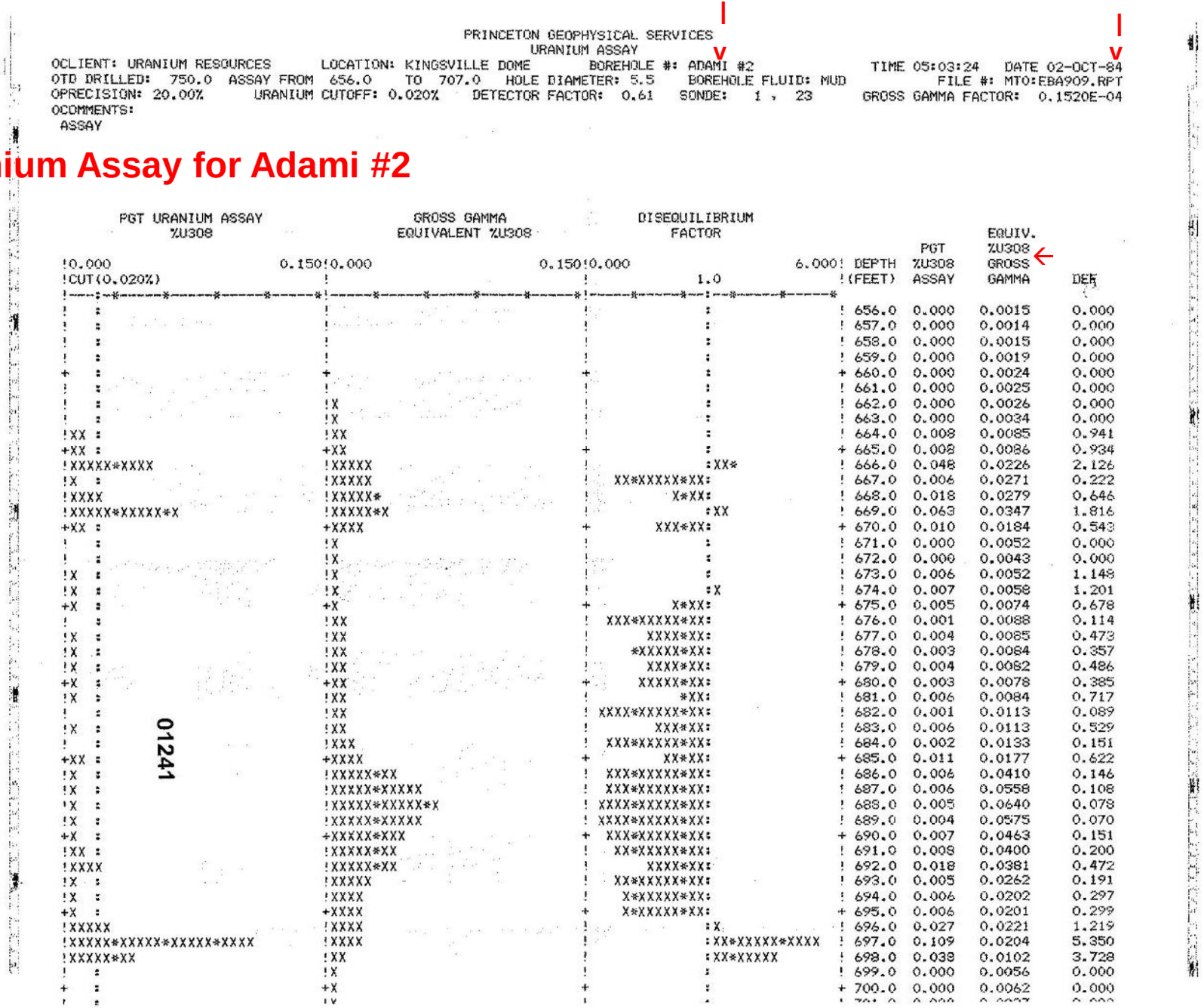
GR readings apparently expressed In CPS (Counts Per Second?) units.

Looking for a Mathematical Model which might allow to quantify a Sand's U content (%U3O8) **based on GR curve readings:**

Is the "Raw CPS" taken straight from the GR Curve in the Log?.

Is "Grade %U3O8" the same as "Equiv. %U3O8 Gross Gamma"?.

Uranium Assay for Adami #2



```
                                PRINCETON GEOPHYSICAL SERVICES
                                      URANIUM ASSAY
OCLIENT: URANIUM RESOURCES      LOCATION: KINGSVILLE DOME      BOREHOLE #: ADAMI #2          TIME 05:03:24   DATE 02-OCT-84
OTD DRILLED:  750.0  ASSAY FROM  656.0   TO  707.0   HOLE DIAMETER: 5.5   BOREHOLE FLUID: MUD          FILE #: MTO:EBA909.RPT
OPRECISION: 20.00%      URANIUM CUTOFF: 0.020%    DETECTOR FACTOR:  0.61   SONDE:   1 ,  23     GROSS GAMMA FACTOR:  0.1520E-04
OCOMMENTS:
 ASSAY
```

PGT URANIUM ASSAY %U3O8	GROSS GAMMA EQUIVALENT %U3O8	DISEQUILIBRIUM FACTOR	DEPTH (FEET)	PGT %U3O8 ASSAY	EQUIV. %U3O8 GROSS GAMMA	DEF
0.000 / CUT(0.020%) … 0.150	0.000 … 0.150	0.000 … 1.0 … 6.000				
			656.0	0.000	0.0015	0.000
			657.0	0.000	0.0014	0.000
			658.0	0.000	0.0015	0.000
			659.0	0.000	0.0019	0.000
			660.0	0.000	0.0024	0.000
			661.0	0.000	0.0025	0.000
	X		662.0	0.000	0.0026	0.000
	X		663.0	0.000	0.0034	0.000
XX	XX		664.0	0.008	0.0085	0.941
XX	XX		665.0	0.008	0.0086	0.934
XXXXX*XXXX	XXXXX	:XX*	666.0	0.048	0.0226	2.126
X	XXXXX	XX*XXXXX*XX:	667.0	0.006	0.0271	0.222
XXXX	XXXXX*	X*XX:	668.0	0.018	0.0279	0.646
XXXXX*XXXXX*X	XXXXX*X	:XX	669.0	0.063	0.0347	1.816
XX	XXXX	XXX*XX:	670.0	0.010	0.0184	0.543
	X	:	671.0	0.000	0.0052	0.000
	X	:	672.0	0.000	0.0043	0.000
X	X	:	673.0	0.006	0.0052	1.148
X	X	:X	674.0	0.007	0.0058	1.201
X	X	X*XX:	675.0	0.005	0.0074	0.678
	XX	XXX*XXXXX*XX:	676.0	0.001	0.0088	0.114
X	XX	XXXX*XX:	677.0	0.004	0.0085	0.473
X	XX	*XXXXX*XX:	678.0	0.003	0.0084	0.357
X	XX	XXXX*XX:	679.0	0.004	0.0082	0.486
X	XX	XXXXX*XX:	680.0	0.003	0.0078	0.385
X	XX	*XX:	681.0	0.006	0.0084	0.717
	XX	XXXX*XXXXX*XX:	682.0	0.001	0.0113	0.089
X	XX	XXX*XX:	683.0	0.006	0.0113	0.529
	XXX	XXX*XXXXX*XX:	684.0	0.002	0.0133	0.151
XX	XXXX	XX*XX:	685.0	0.011	0.0177	0.622
X	XXXXX*XX	XXX*XXXXX*XX:	686.0	0.006	0.0410	0.146
X	XXXXX*XXXXX	XXX*XXXXX*XX:	687.0	0.006	0.0558	0.108
X	XXXXX*XXXXX*X	XXXX*XXXXX*XX:	688.0	0.005	0.0640	0.078
X	XXXXX*XXXXX	XXXX*XXXXX*XX:	689.0	0.004	0.0575	0.070
X	XXXXX*XXX	XXX*XXXXX*XX:	690.0	0.007	0.0463	0.151
XX	XXXXX*XX	XX*XXXXX*XX:	691.0	0.008	0.0400	0.200
XXXX	XXXXX*XX	XXXX*XX:	692.0	0.018	0.0381	0.472
X	XXXXX	XX*XXXXX*XX:	693.0	0.005	0.0262	0.191
X	XXXX	X*XXXXX*XX:	694.0	0.006	0.0202	0.297
X	XXXX	X*XXXXX*XX:	695.0	0.006	0.0201	0.299
XXXXX	XXXX	:X	696.0	0.027	0.0221	1.219
XXXXX*XXXXX*XXXXX*XXXX	XXXX	:XX*XXXXX*XXXX	697.0	0.109	0.0204	5.350
XXXXX*XX	XX	:XX*XXXXX	698.0	0.038	0.0102	3.728
	X	:	699.0	0.000	0.0056	0.000
	X	:	700.0	0.000	0.0062	0.000

01241

Is “Equiv. %U3O8 Gross Gamma” the same as “Grade - %U3O8” ?.

Is the “OMW” well a Monitoring Well in the zone overlaying the Production Zone?

What is the meaning of “250” and “400” in the Well’s name?. Is it related to the depth to the monitored zone?

Is an “AA” well a Monitoring Well in the zone underlying the Production Zone?

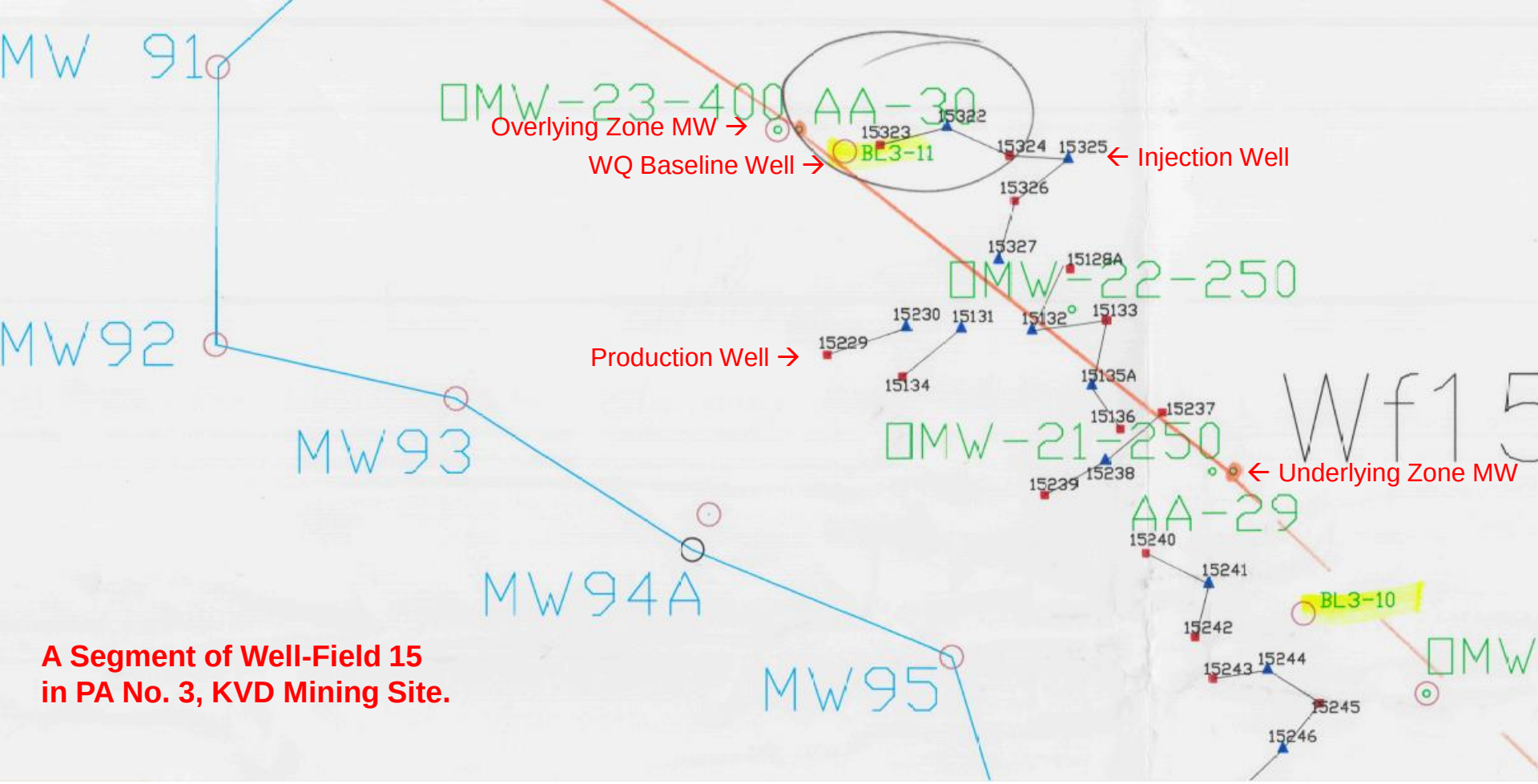
WELL STATUS

PAA #3 MONITOR WELLS

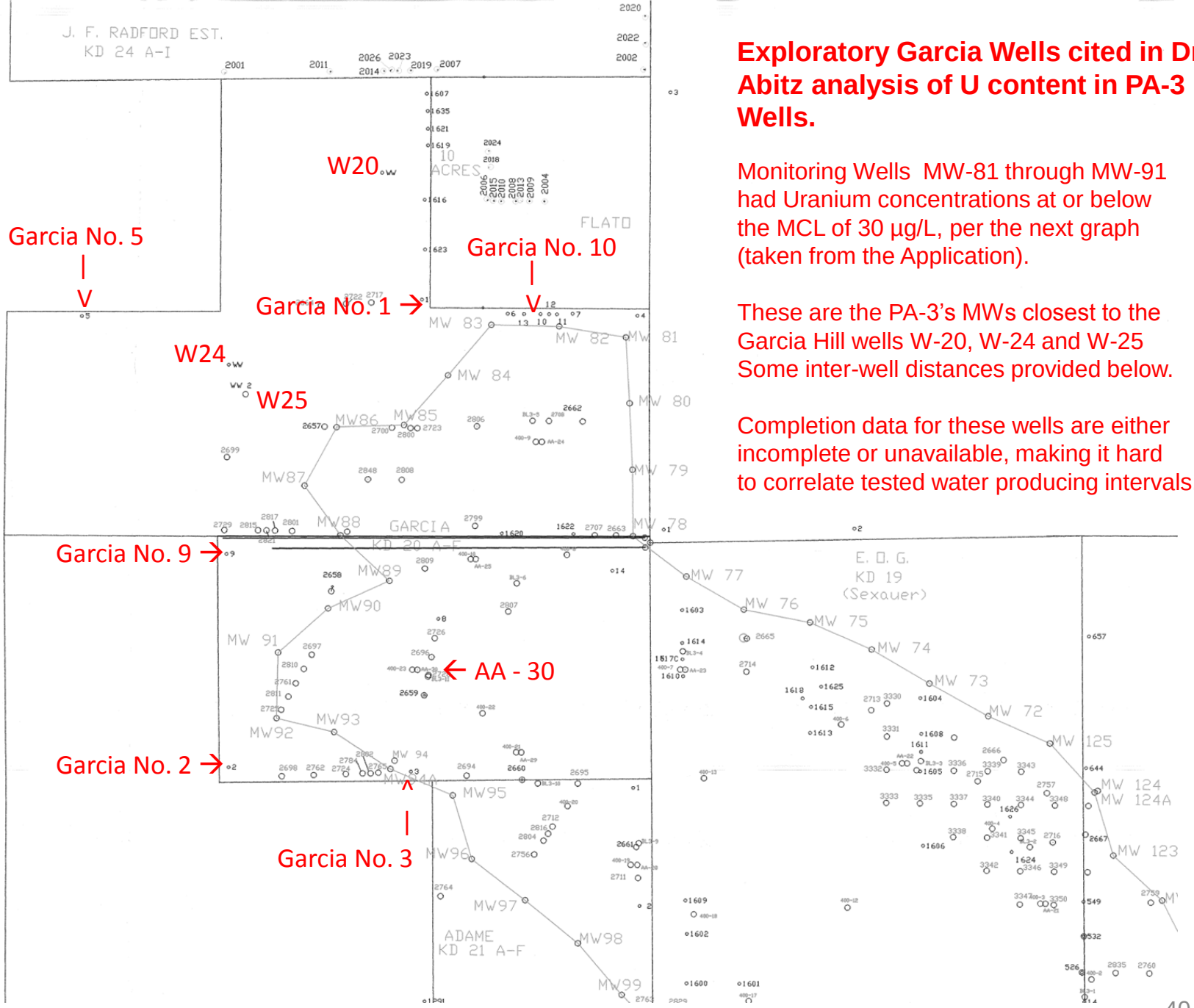
As of 06/25/97

	WELL NUMBER	STATUS	REPORT		WELL NUMBER	STATUS	REPORT
1	MW-7[illegible]	Completed	C	50	OMW-1-250	Complete	C
2	MW-7[illegible]	Completed	C	51	OMW-2-250	Complete	C
3	MW-74	Completed	C	52	OMW-3-250	Completed	C
4	MW-75	Completed	C	53	OMW-4-250	Completed	C
5	MW-76	Completed	C	54	OMW-5-250	Completed	C
6	MW-77	Completed	C	55	OMW-6-250	Completed	C
7	MW-78	Completed	C	56	OMW-7-250	Completed	C
8	MW-79	Completed	C	57	OMW-8-250	Completed	C
9	MW-80	Completed	C	58	OMW-9-250	Completed	C
10	MW-81	Completed	C	59	OMW-10-250	Completed	C
11	MW-82A	Completed	C	60	OMW-11-250	Completed	C
12	MW-83	Completed	C	61	OMW-12-250	Completed	C
13	MW-84	Completed	C	62	OMW-13-250	Completed	C
14	MW-85	Completed	C	63	OMW-14-400	Completed	C
15	MW-86	Completed	C	64	OMW-15-400	Completed	C
16	MW-87	Completed	C	65	OMW-16-400	Completed	C
17	MW-88	Completed	C	66	OMW-17-400	Completed	C
18	MW-89	Completed	C	67	OMW-18-250	Completed	C
19	MW-90	Completed	C	68	OMW-19-400	Completed	C
20	MW-91	Completed	C	69	OMW-20-250	Completed	C
21	MW-92	Completed	C	70	OMW-21-250	Completed	C
22	MW-93	Completed	C	71	OMW-22-250	Completed	C
23	MW-94A	Completed	C	72	OMW-23-400	Completed	C
24	MW-95	Completed	C	73	OMW-24-250	Completed	C
25	MW-96	Completed	C	74	OMW-25-250	Completed	C
26	MW-97	Completed	C	75	OMW-26-250	DELETED	
27	MW-98	Completed	C				
28	MW-99	Completed	C	76	AA-20	Complete	C
29	MW-100	Completed	C	77	AA-21	Completed	C
30	MW-101	Completed	C	78	AA-22	Completed	C
31	MW-102	Completed	C	79	AA-23	Completed	C
32	MW-103	Completed	C	80	AA-24	Completed	C
33	MW-104	Completed	C	81	AA-25	Completed	C
34	MW-105	Completed	C	82	AA-26	Completed	C
35	MW-106	Completed	C	83	AA-27	Completed	C
36	MW-107	Completed	C	84	AA-28	Completed	C
37	MW-108	Completed	C	85	AA-29	Completed	C
38	MW-109	Completed	C	86	AA-30	Completed	C
39	MW-115	Completed	C	87	B.L. 8501	Complete	C
40	MW-116	Complete	C	88	B.L. 8502	Complete	C
41	MW-117	Complete	C	89	B.L. 8503	Complete	C
42	MW-118	Completed	C	90	B.L. 8504	Completed	C
43	MW-119	Completed	C	91	B.L. 8505	Complete	C
44	MW-120	Completed	C	92	B.L. 8506	Complete	C
45	MW-121	Completed	C	93	B.L. 8507	Complete	C
46	MW-122	Completed	C	94	B.L. 8508	Completed	C
47	MW-123	Completed	C	95	B.L. 8509	Completed	C
48	MW-124	Completed	C	96	B.L. 8510	Complete	C
49	MW-125	Completed	C	97	B.L. 8511	Completed	C

01614



Is the BL3-11 Well a Water Quality Baseline Well?. The BL3-11 Well is located about 60 Ft from the 15323 Well, apparently, a Production Well. Are water analysis results available for samples from the BL3-11?. The BL3-11 Well is also about 75 Ft from the AA-30 Well, which seems to be a monitor well for the AA sand (need to confirm) underlying the producing zone (the A sand?). The BL3-11 is also about 83 Ft from the OMW-23-400 Well, which also seems to be a Water Quality monitoring well for the sand overlying the Production Zone (need to confirm). The above info leads to believe that the BL3-11 may be completed in the U Producing Zone, though data are needed to validate these conjectures. The underlying question is whether Baseline Water Quality Data came from the BL3-11 well, though it seems to be close to an ore rich portion of the aquifer. How about BL3-10?.

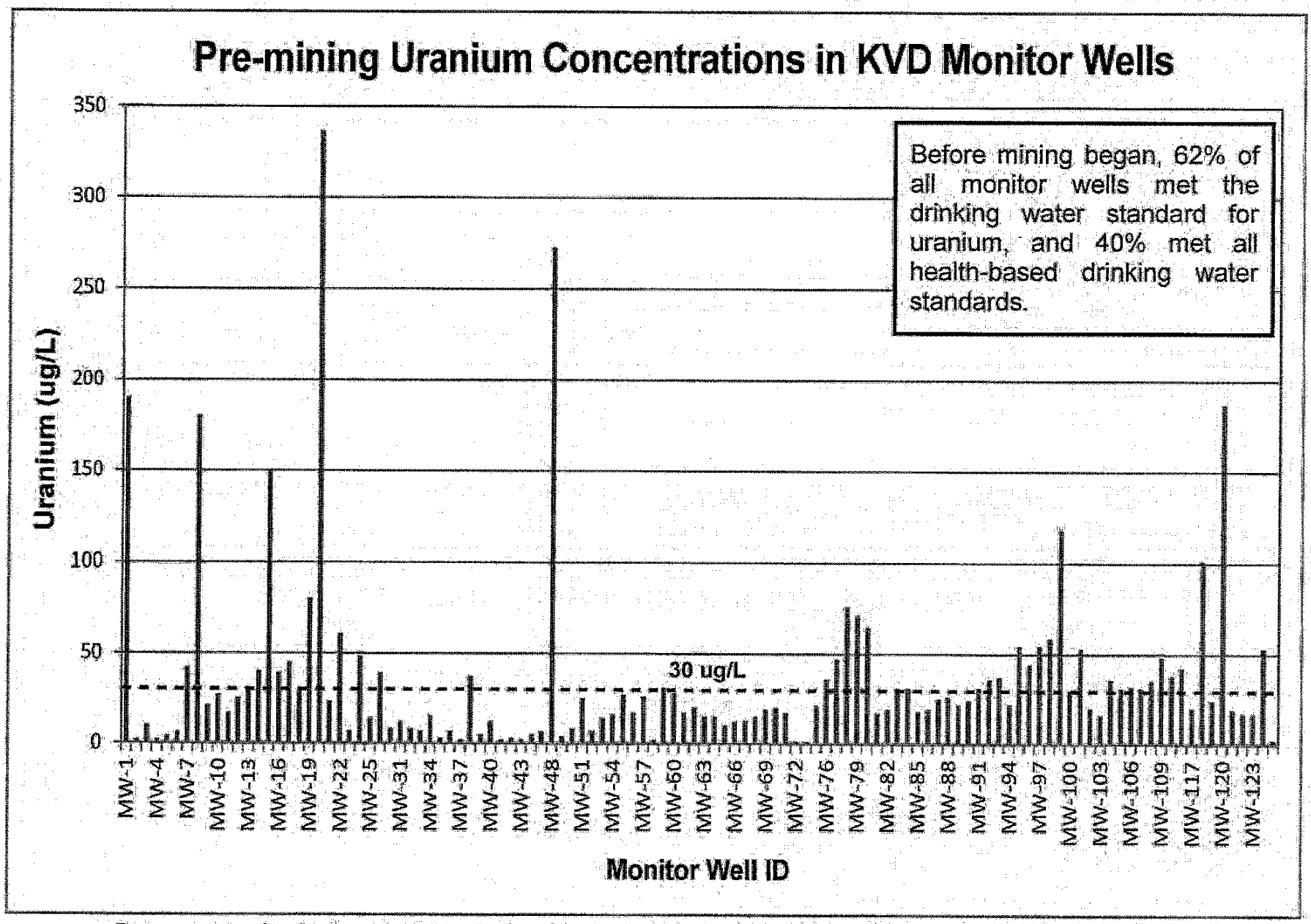


Exploratory Garcia Wells cited in Dr. Abitz analysis of U content in PA-3 Wells.

Monitoring Wells MW-81 through MW-91 had Uranium concentrations at or below the MCL of 30 µg/L, per the next graph (taken from the Application).

These are the PA-3's MWs closest to the Garcia Hill wells W-20, W-24 and W-25 Some inter-well distances provided below.

Completion data for these wells are either incomplete or unavailable, making it hard to correlate tested water producing intervals.



Data sources: Applications for PAAs 1, 2, and 3, produced by URI in 1987, 1989, and 1997/2002, respectively.

Monitoring Wells MW-81 through MW-91, located near GH, show water Uranium content **at or below MCL**.

InterWell Distances in Ft

	GH W-24	GH W-25
Garcia 5	915	1075
Garcia 1	1207	1184
MW-86	739	573
Garcia 2699	547	388

Estimated distances between Garcia Hill Wells and Key Locations at North end of PA-3

State Water Well Report

Jessie Grimes Well

Location Unknown

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

A. WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
JESSIE GRIMES	P.O BOX 5266	KINGSVILLE	TEXAS	78364

2) WELL LOCATION

County	Physical Address	City	State	Zip
KLEBERG 137	C.R 1118	RICARDO	TEXAS	78364

Lat. | Long. | Grid # 83-34-5

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 8/19/02
Completed 8/21/02

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
7 7/8	0	300
6 ¾	300	662

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	5	CLAY
5	15	CALICHE
15	95	CLAY
95	105	SAND
105	210	CLAY
210	220	SAND
220	230	CLAY
230	250	SAND
250	270	CLAY
270	295	SAND
295	310	CLAY
310	330	SAND

(Use reverse side of Well Owner's copy, if necessary)

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8) Borehole Completion ☐ Open Hole ☑ Straight Wall ☐ Under-reamed ☐ Gravel Packed ☐ Other
If Gravel Packed give the interval from ft. to ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
4 ½	N	PVC CASING	0	300	
4	N	PVC CASING	300	622	
4	N	PVC SCREEN	622	662	16

9) Cementing Data
Cementing from 0 ft. to 10 ft. # of sacks used 2
ft. to ft. # of sacks used
Method Used POURED
Cementing By AMOS MARTIN
Distance to septic system field or other concentrated contamination 100 ft.
Method of verification of above distance MEASURED

10) Surface Completion
☑ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 140 ft. below Date 8/21/02
Artesian Flow gpm. Date / /

12) Packers

Type	Depth
CEMENT BASKET	575

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet, etc., 200 ft.

15) Water Test
Typetest ☐ Pump ☐ Bailer ☑ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

16) Water Quality
Did you knowingly penetrate any strata which contain undesirable constituents?
☐ Yes ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER?
Type of water Depth of Strata
Was a chemical analysis made? ☐ Yes ☑ No

Company or Individual's Name (type or print) MARTIN WATER WELLS Lic. No. 1669WI
Address 2151 N. HWY 77 City ROBSTOWN State TX Zip 78380

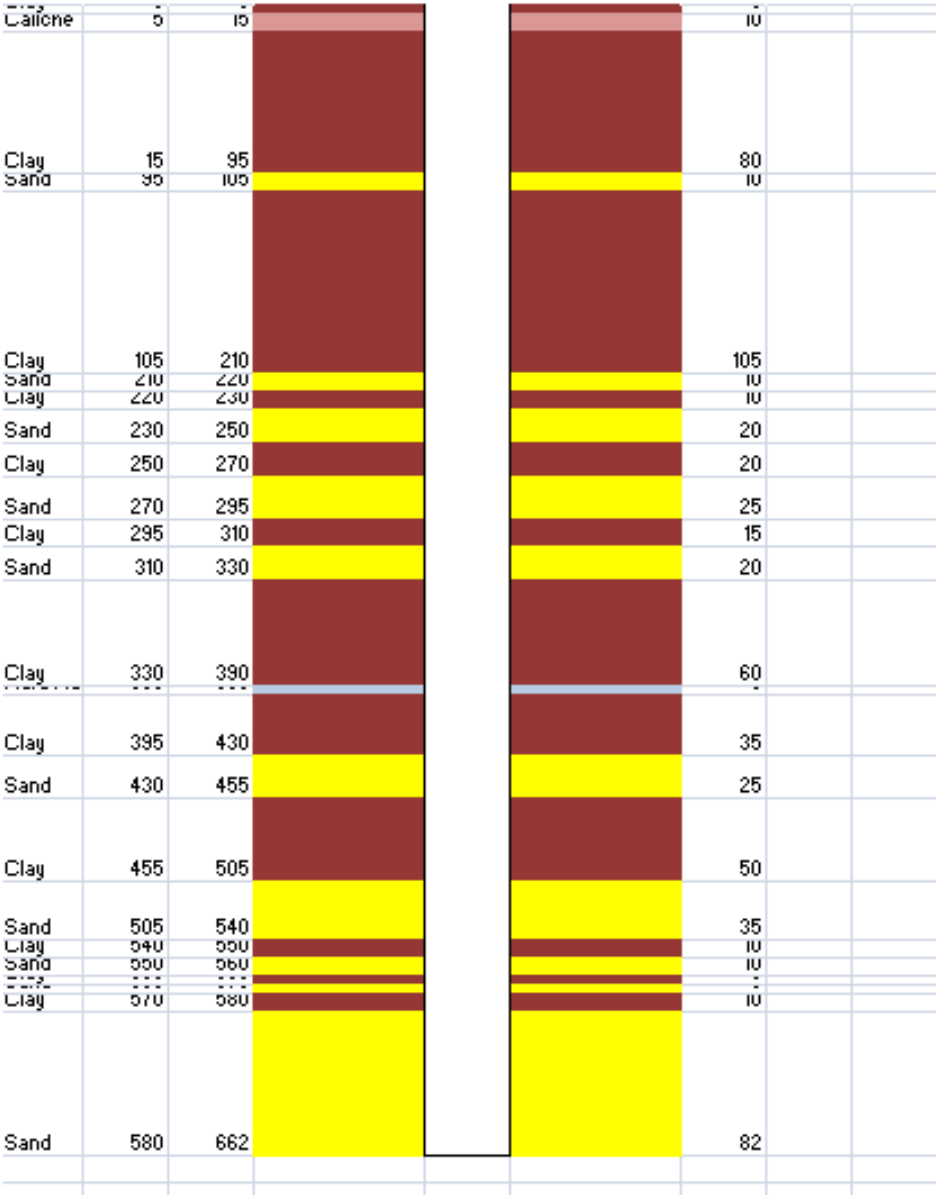
Signature	Date	Signature	Date
Amos Martin	/ /		/ /
Licensed Driller/Pump Installer		Apprentice	

TDLR FORM 004WWD Copies to TDLR - Owner - Driller/Pump Installer Form provided by Forms On-A-Disk, Inc. (Dallas, Texas ((214) 340-9429

Jessie Grimes - 83 – 34 – 5 (08/21/02)

Incomplete Location Information:

No Coordinates Available.



Well Completion Information:

Cement behind casing from Surface to 10 Ft. There appears to be no Cement, or any other sealing material, behind the casing in this well below 10 Ft.

"Top of Screened Interval" in this well: 622 Ft.

State Water Well Report

Exxon-Co-USA Well

Location Unknown

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only: Well No. 83-33-3A; Located on map yes; Received: e.f.s.

1) OWNER Exxon Co. USA (Name) Address P.O. Box 672, Kingsville, Tex. 78363 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL: County Kleberg 7 miles in SE (N.E., S.W., etc.) direction from Kingsville (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:
Section No. ____ Block No. ____ Township ____
Abstract No. ____ Survey Name ____
Distance and direction from two intersecting section or survey lines ____

#15
☑ See attached map. Exxon 83-33-3E

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☑ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other ____

5) DRILLING METHOD (Check): ☑ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other ____

6) WELL LOG: Date drilled 10-18-82

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
6 3/4	Surface	740

7) BOREHOLE COMPLETION: ☐ Open Hole ☑ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other ____
If Gravel Packed give interval . . . from ____ ft. to ____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	112	Clay + caliche
112	125	Sand
125	158	Shale
158	180	Sand
180	200	Shale + clay
200	245	Sand
245	340	Shale + clay
340	395	Sand
395	490	Shale
490	560	Fine sand
560	600	Shale
600	640	Sand
640	660	Shale + clay
660	690	Broken sand
690	715	Shale + clay
715	740	Sand

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4	N	Galv. Casing	0	719	
4	N	S.S. Screen	719	740	

CEMENTING DATA
Cemented from ____ ft. to ____ ft.
Method used N/A
Cemented by ____ (Company or Individual)

9) WATER LEVEL:
Static level 90 ft. below land surface Date 10-18-82
Artesian flow ____ gpm. Date ____

10) PACKERS: Type Cement basket Depth 705

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JAN 25 1983
DEPT. OF WATER RESOURCES

11) TYPE PUMP: ☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other N/A
Depth to pump bowls, cylinder, jet, etc., ____ ft.

(Use reverse side if necessary)

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☑ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☑ No

12) WELL TESTS: ☑ Type Test: ☐ Pump ☐ Bailer ☑ Jetted ☐ Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME Amos Martin (Type or Print) Water Well Drillers Registration No. 1669

ADDRESS Hwy 77 N. (Street or RFD) Robstown (City) Texas (State) 78380 (Zip)

(Signed) Amos Martin (Water Well Driller) Martin Water Wells (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY

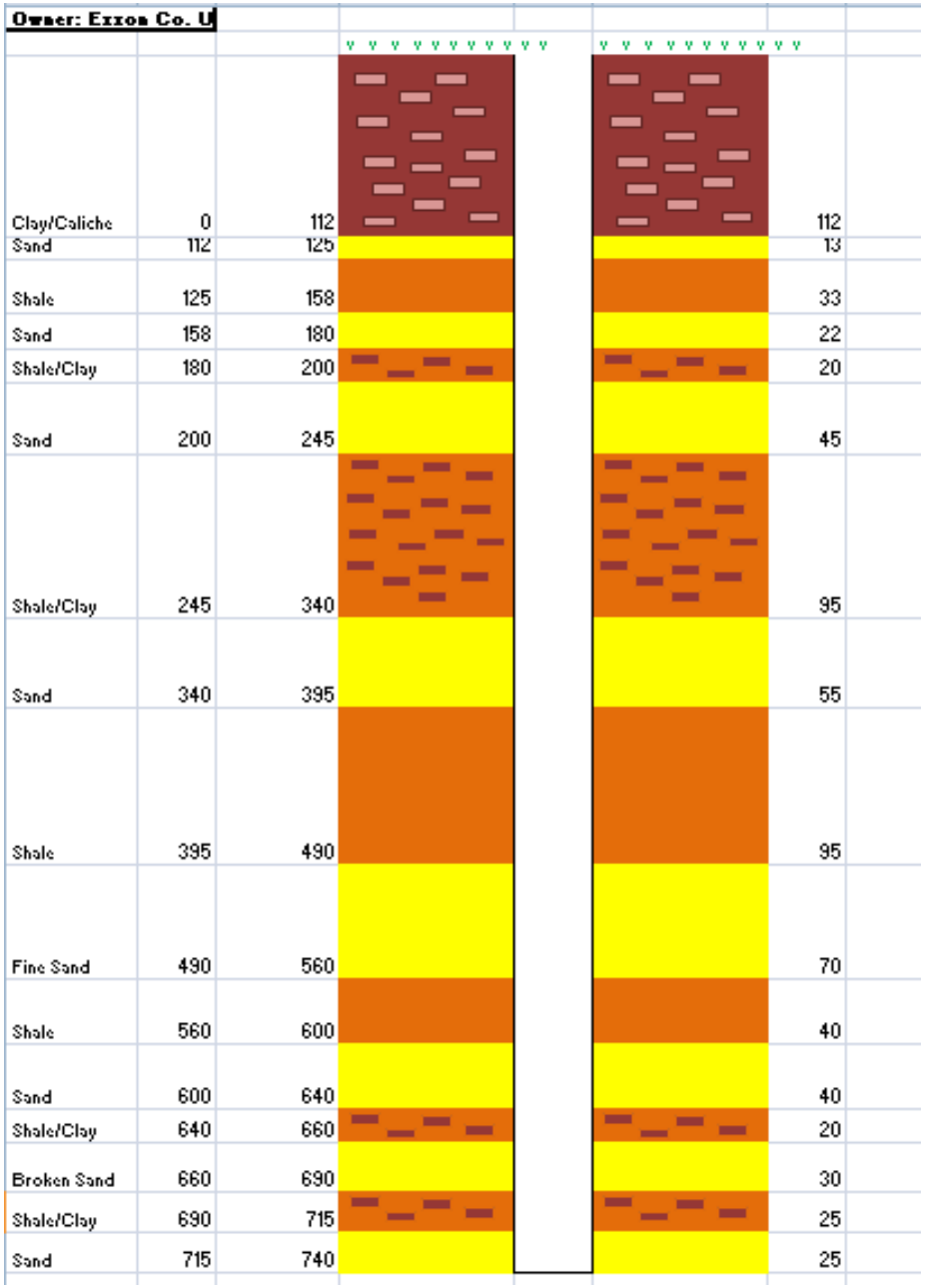
Exxon Co. USA - Well No. 84 – 3? - 3A (10/18/82)

Incomplete Location Information:

No Coordinates Available.

Confusing Location Description in the “State of Texas Water Well Report”.

Reference Made to “Map for 83 – 33 – 3E(?)”. What does it mean?.



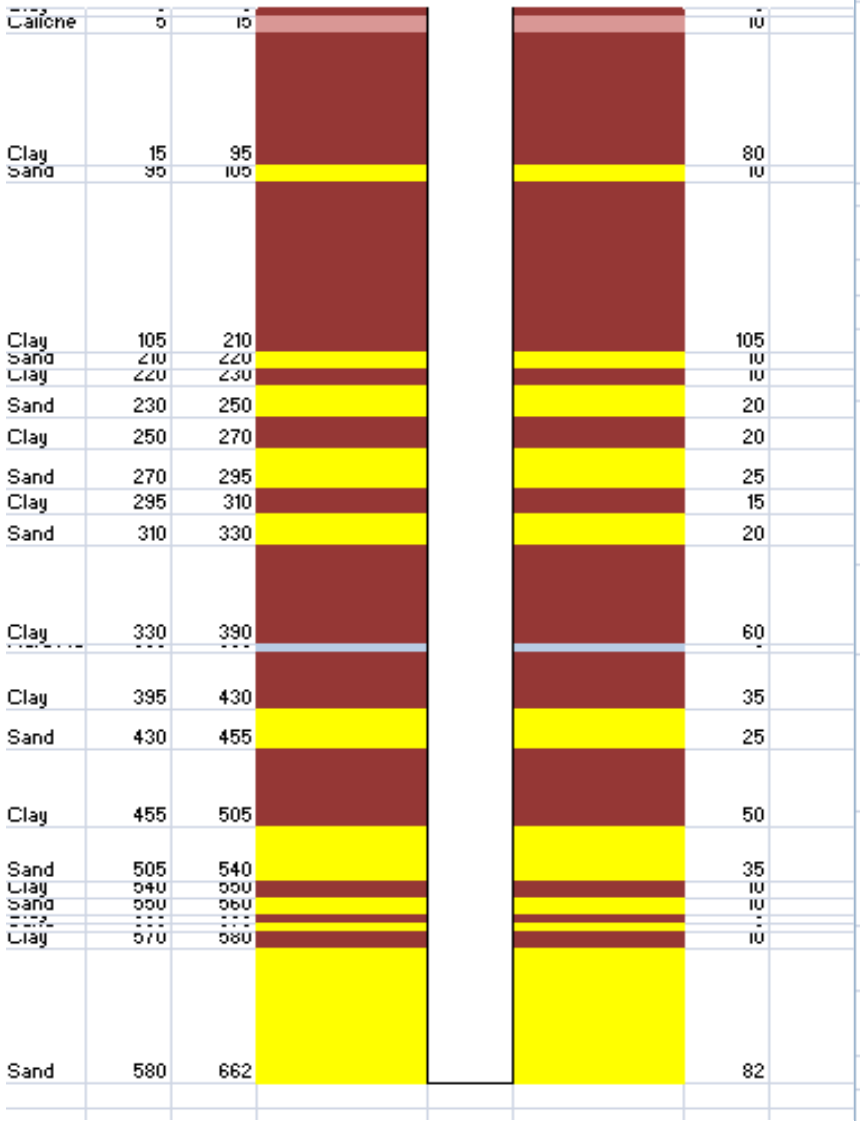
Incomplete Completion Information:

Is there Cement, or any other Sealing Material, behind the Casing in this well?.

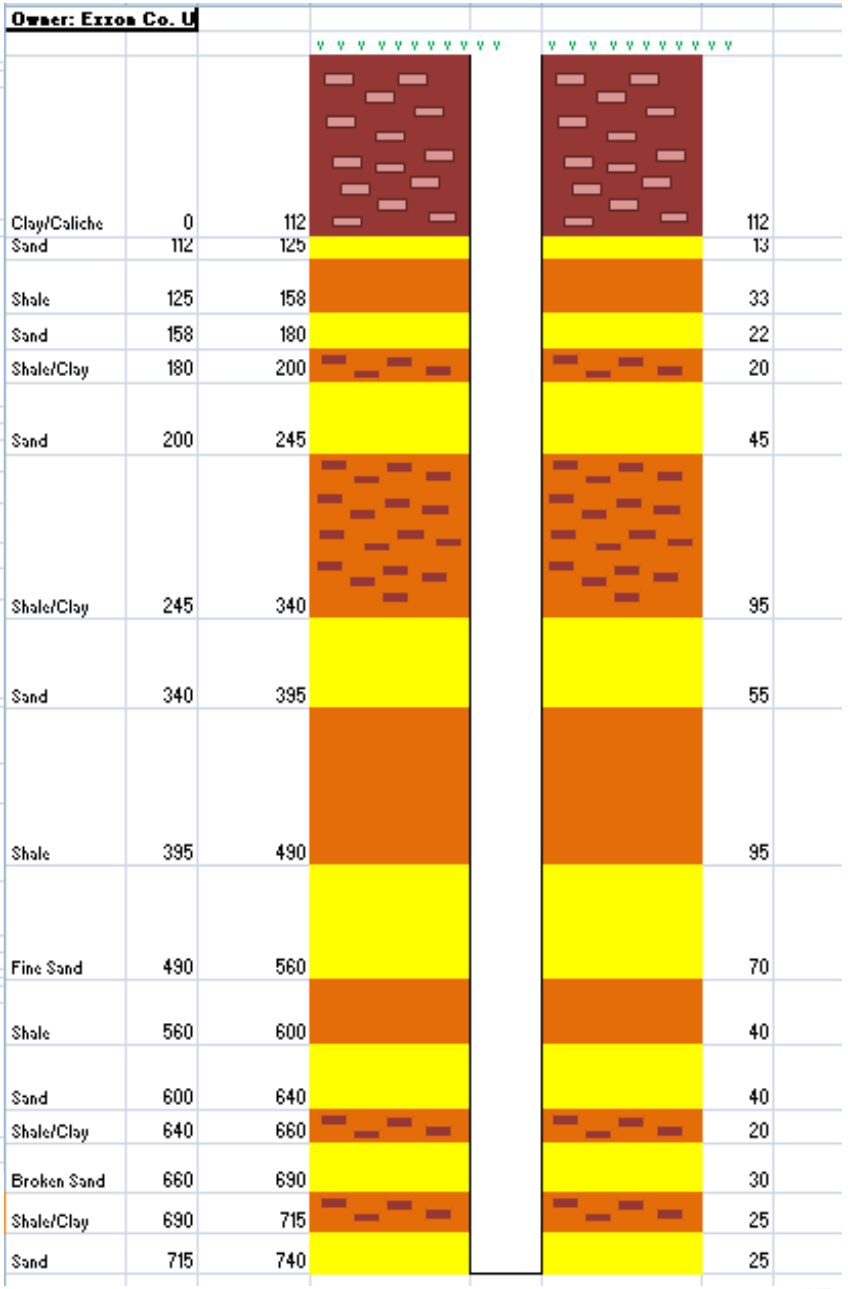
What is the “Top of the Screened Interval” in this well?.

Jessie Grimes - 83 – 34 - 5

Exxon Co. USA - Well No. 84 – 3? - 3A



Caliche	5	15	10
Clay	15	95	80
Sand	95	105	10
Clay	105	210	105
Sand	210	220	10
Clay	220	230	10
Sand	230	250	20
Clay	250	270	20
Sand	270	295	25
Clay	295	310	15
Sand	310	330	20
Clay	330	390	60
Clay	395	430	35
Sand	430	455	25
Clay	455	505	50
Sand	505	540	35
Clay	540	550	10
Sand	550	560	10
Clay	570	580	10
Sand	580	662	82



Owner: Exxon Co. U			
Clay/Caliche	0	112	112
Sand	112	125	13
Shale	125	158	33
Sand	158	180	22
Shale/Clay	180	200	20
Sand	200	245	45
Shale/Clay	245	340	95
Sand	340	395	55
Shale	395	490	95
Fine Sand	490	560	70
Shale	560	600	40
Sand	600	640	40
Shale/Clay	640	660	20
Broken Sand	660	690	30
Shale/Clay	690	715	25
Sand	715	740	25

STATE OF TEXAS WELL REPORT for Tracking #178262

Owner:	**FERMIN GARZA**	Owner Well #:	**No Data**
Address:	**424 N. FM 2619** **KINGSVILLE , TX 78363**	Grid #:	**83-34-5**
Well Location:	**C.R 2130** **KINGSVILLE , TX 78363**	Latitude:	**27° 26' 43" N**
Well County:	**Kleberg**	Longitude:	**097° 49' 25" W**
Elevation:	**No Data**	GPS Brand Used:	**GARMIN**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Date: Started: **4/27/2009** Completed: **4/30/2009**

Diameter of Hole: Diameter: **7 7/8 in From Surface To 300 ft** Diameter: **6 3/4 in From 300 ft To 595 ft**

Drilling Method: **Mud Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data: 1st Interval: **From 0 ft to 10 ft with 2 CEMENT (#sacks and material)**
2nd Interval: **No Data**
3rd Interval: **No Data**
Method Used: **POURED**
Cemented By: **LARRY MARTIN**
Distance to Septic Field or other Concentrated Contamination: **N/A ft**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **145 ft. below land surface on 4/30/2009**
Artesian flow: **No Data**

Packers: **CEMENT BASKET 520**
RUBBER 545

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **Submersible**
Depth to pump bowl: **220 ft**

Well Tests: **Jetted**
Yield: **(No Data) GPM with (No Data) ft drawdown after (No Data) hours**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **MARTIN WATER WELLS**
2151 N. HWY 77
ROBSTOWN , TX 78380

Driller License Number: **2094**

Licensed Well Driller Signature: **LARRY MARTIN**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#178262**) on your written request.

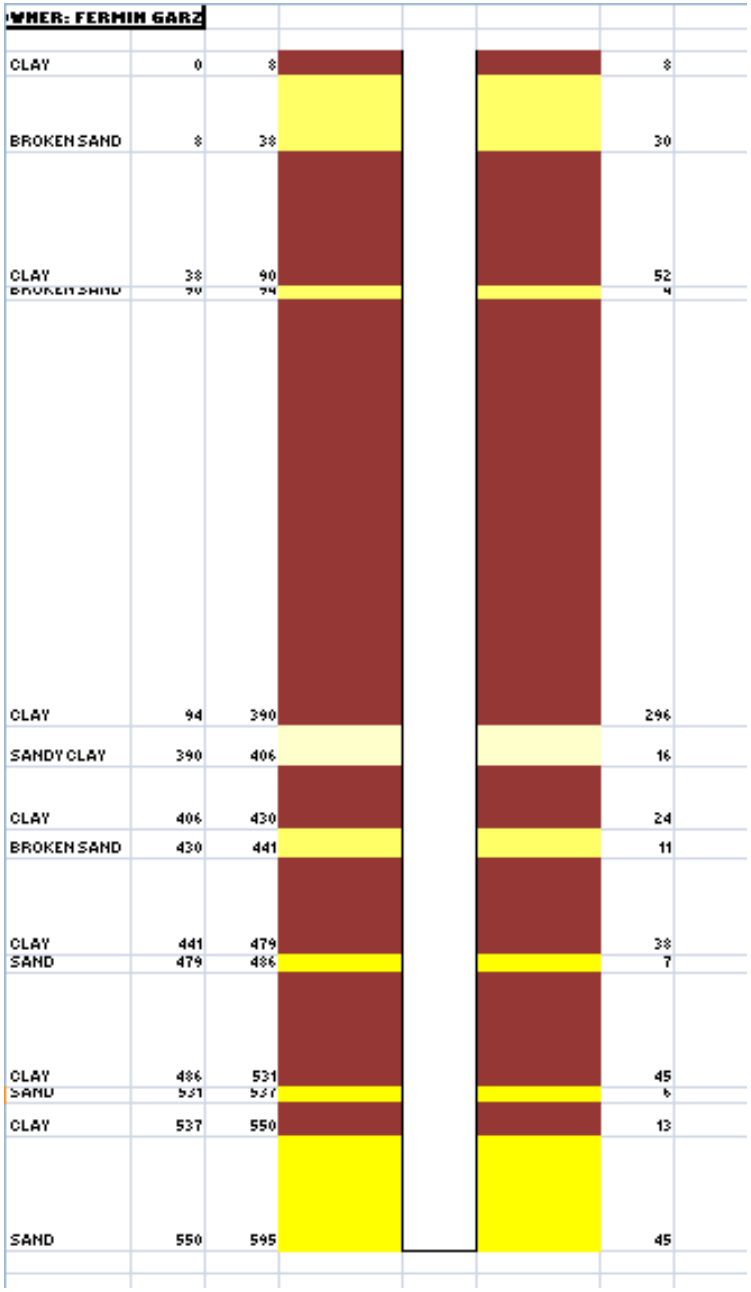
Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL	CASING, BLANK PIPE & WELL SCREEN DATA
From (ft) To (ft) Description	Dia. New/Used Type Setting From/To
0-8 CLAY	**4 1/2 N PVC CASING 0-300**
8-38 BROKEN SAND	**4 N PVC CASING 300-555**
38-90 CLAY	**4 N PVC SCREEN 555-595 12**
90-94 BROKENS SAND	
94-390 CLAY	
390-406 SANDY CLAY	
406-430 CLAY	
430-441 BROKEN SAND	
441-479 CLAY	
479-486 SAND	
486-531 CLAY	
531-537 SAND	
537-550 CLAY	
550-595 SAND	

State Water Well Report Fermin Garza Water Well

Fermin Garza (04/27/09)

Incomplete Completion Information:



Is there Cement, or any other Sealing Material, below 10 Ft, behind the Casing in this well?.

Up to 119 Ft of Water Productive (?) Sand here.

“Top of the Screened Interval” in this well: 555 Ft.

Heberto Garcia

Garcia Well W-25

State Water Well Report

Send original copy by certified mail to the Texas Water Development Board P. O. Box 12386 Austin, Texas 78711

State of Texas

WATER WELL REPORT

For TWDB use only
Well No.
Located on map
Received:
Form GW 8
Form GW 9

1) OWNER: Person having well drilled: Heberto Garcia (Name) Address: Caliche Pit Road - Ricardo (Street or RFD) Kingsville, Texas (City) (State)

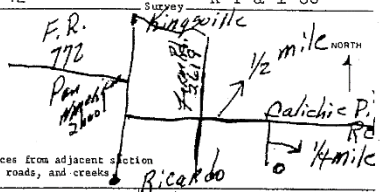
Landowner: Heberto Garcia (Name) Address: Same as above (Street or RFD) (City) (State)

2) LOCATION OF WELL: County: Kleberg Labor: League: Abstract No.:

NW¼ NE¼ SW¼ SE¼ of Section: 7 Block No.: 42 Survey: K T & I Co

(Circle as many as are known)

miles in: 7½Mi SE (NE, SW, etc) direction from: Kingsville, Texas (Town)



Sketch map of well location with distances from adjacent section or survey lines, and to landmarks, roads, and creeks.

Ftn. 1

3) TYPE OF WORK (Check): New Well ☒ Deepening ☐ Reconditioning ☐ Plugging ☐

4) PROPOSED USE (Check): Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

5) TYPE OF WELL (Check): Rotary ☒ Driven ☐ Dug ☐ Cable ☐ Jetted ☐ Bored ☐

6) WELL LOG: Diameter of hole 9 7/8 in. Depth drilled 631 ft. Depth of completed well 631 ft. Date drilled 5-5-67

All measurements made from 4 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	19	Clay and caliche
19	35	sand
35	91	clay
91	108	sand
108	171	clay
171	186	sand
186	233	clay
233	241	sand
241	439	clay
439	451	sand
451	508	clay
508	517	sand
517	575	clay with red shale
575	601	red sand with strks. of shal
601	609	red shale
609	631	red sand

(Attach additional sheet if necessary)

7) COMPLETION (Check): Straight wall ☒ Gravel packed ☐ Other ☐ Under reamed ☐ Open hole ☐

8) WATER LEVEL: Static level 119 ft. below land surface Date 5-5-67 Artesian pressure lbs. per square inch Date

9) CASING: Type: old ☐ New ☒ Steel ☐ Plastic ☐ Other ☐ Cemented from ft. to ft.

10) SCREEN: Type Slotted with plastic cloth sock Perforated ☐ Slotted ☒

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
7"	0	606	26 lbs.

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot size
4 1/2"	610	631	

11) WELL TESTS: Was a pump test made? ☒ Yes ☐ No If yes by whom? R. C. Custer

Yield: 75 gpm with ft. drawdown after hrs

Bailer test gpm with ft. drawdown after hrs

Artesian flow gpm Date

Temperature of water

Was a chemical analysis made? ☐ Yes ☐ No

Did any strata contain undesirable water? ☒ Yes ☐ No

Type of water? All sands from 19' to 506'

12) PUMP DATA: Manufacturer's Name Aeromotor

Type Submersible H.P. 2

Designed pumping rate 1700 gpm ☐ gph ☒

Type power unit Electric

Depth to bowls, cylinder, jet, etc., 168 ft. below land surface.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME R. C. Custer (Type or Print) Water Well Drillers Registration No. 728

Address Rt. 1, Box 450A (Street or RFD) Kingsville, (City) Texas (State)

(Signed) R.C. Custer (Water Well Driller) R.C. Custer Water Well Drilling (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

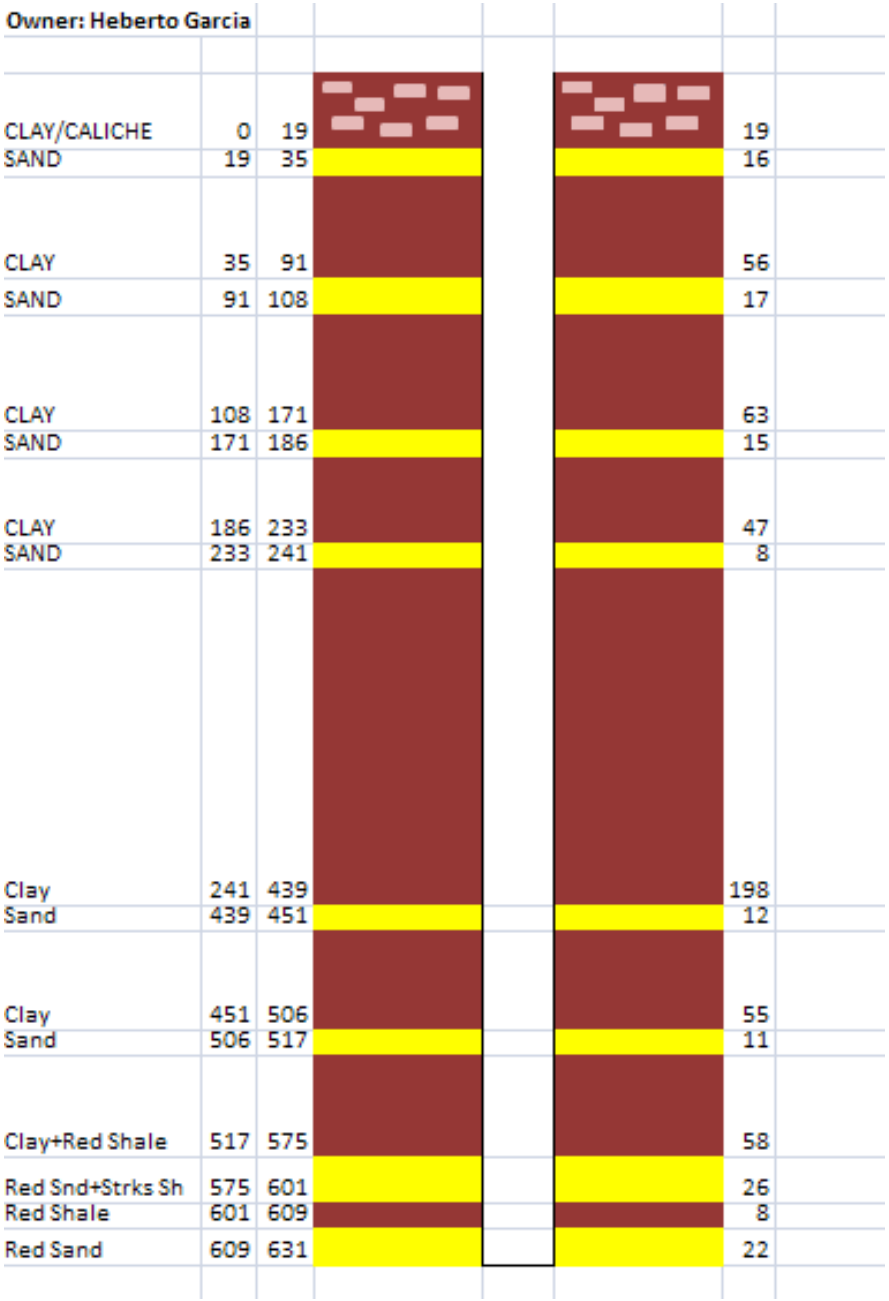
DEPOSITION EXHIBIT Prof. 11

Heberto Garcia - GH W-25 (05/05/67)

Incomplete Completion Information:

Is there Cement, or any other Sealing Material, behind the Casing in this well?. It appears not.

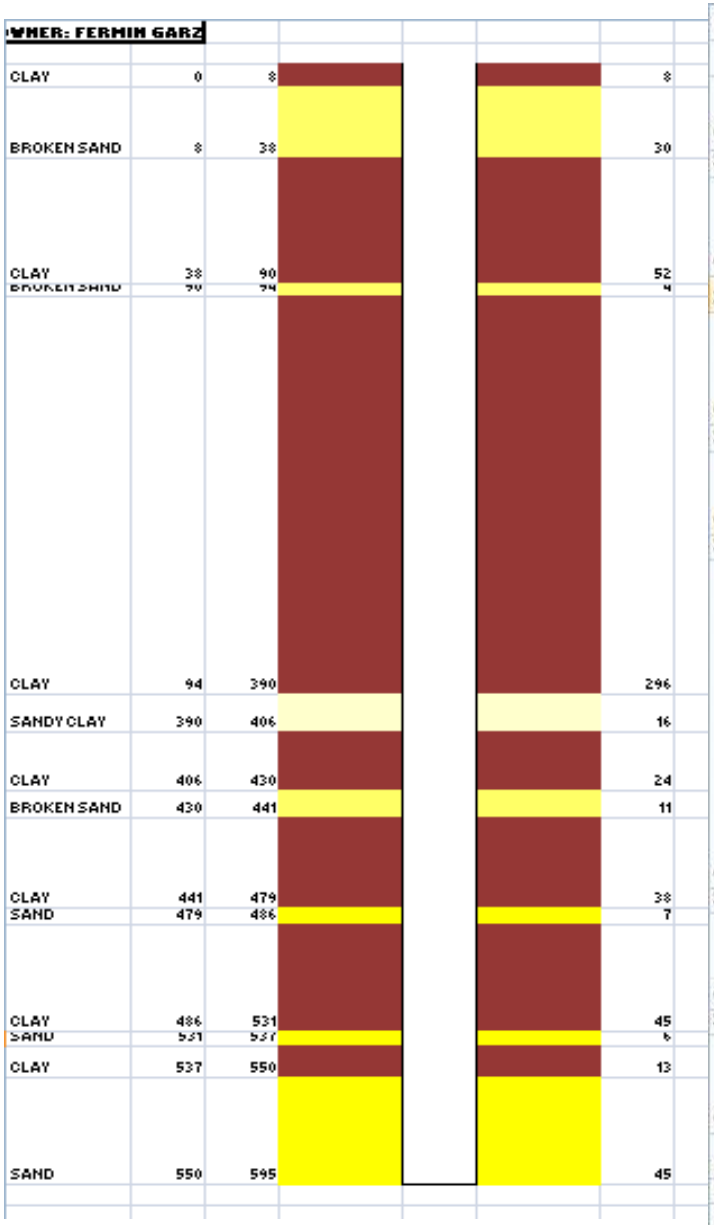
“Top of Screened Interval” in this well: 610 Ft.



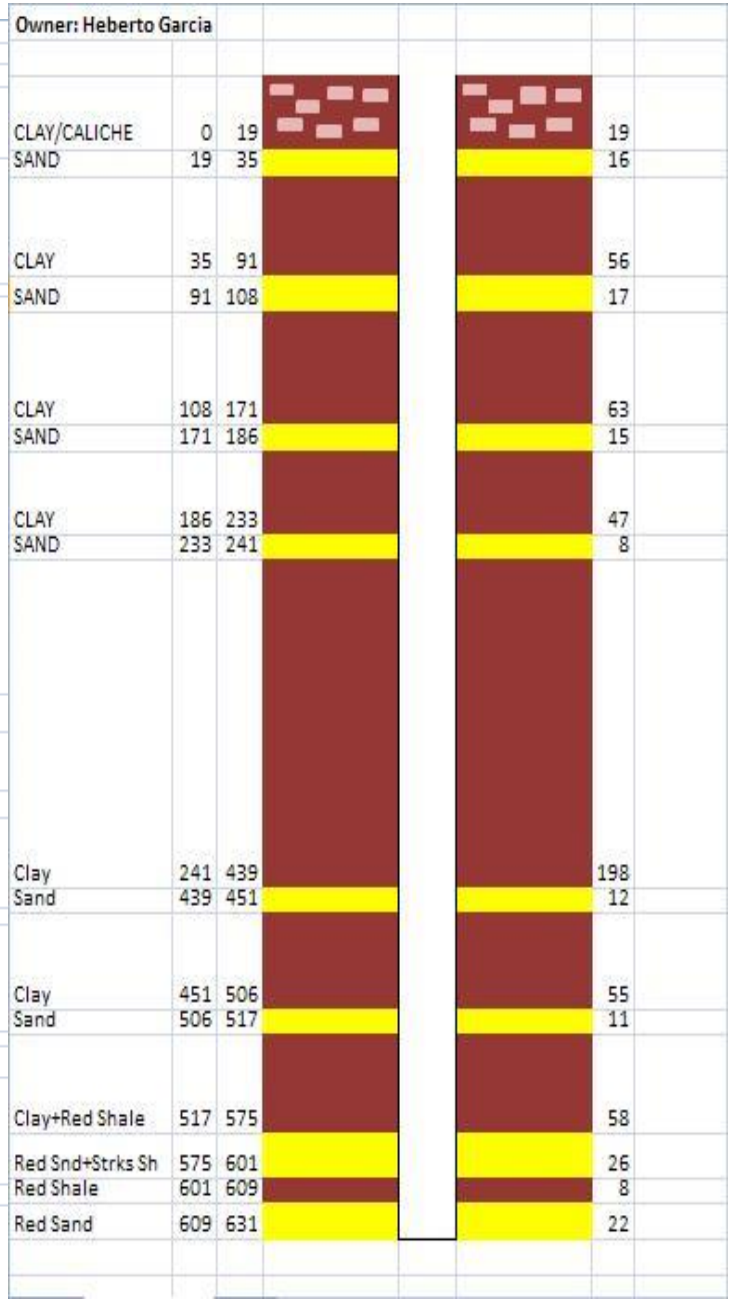
Owner: Heberto Garcia			
CLAY/CALICHE	0	19	19
SAND	19	35	16
CLAY	35	91	56
SAND	91	108	17
CLAY	108	171	63
SAND	171	186	15
CLAY	186	233	47
SAND	233	241	8
Clay	241	439	198
Sand	439	451	12
Clay	451	506	55
Sand	506	517	11
Clay+Red Shale	517	575	58
Red Snd+Strks Sh	575	601	26
Red Shale	601	609	8
Red Sand	609	631	22

Up to 127 Ft of Water Productive (?) Sands here.

Fermin Garza



Heberto Garcia - W-25?



Pre 1984 - 1987

WELL	LEAD ACETATE	Eh	ODOR	TASTE	COLOR Sd	LOC. MAP	DO	FRESH/STORED	POX/20X/Rd
L-1	BWN/WHT	-25	H_2S	?	ORG/Gry	20X/Rd	4.0	FRESH	20X/Rd
PBL-2	BWN/WHT	-28	STRONG H_2S	?	ORG.	POX/20X	1.0	FRESH	20X/Rd
PBL-4	BWN/WHT	-95	STRONG H_2S	?	GRY	Rd	.5	FRESH	Rd
PBL-5	WHT	0	NONE	?	ORG/Gry	20X/Rd	1.0	FRESH	20X/Rd
JAY ORFIN #74	WHT	-10	FAINT H_2S	SLY SULPHVR	GRY	Rd	2.5	VERY NOREATE BUT SUPP. FRESH	Rd
COLLINS #73	WHT	+80	NONE	?	GRY	Rd	4.5	STORED	Rd (INTO Rd FROM #73,74)
VIO ROSSE #72	BWN	-360	STRONG H_2S	SULPHVR	?	Rd	4.5	FRESH	Rd (ALL WELLS IN AREA: RED Sd'S)
RODLO BARRIS #18	WHT	+80	NONE	?	BWN	POX	1.5	FRESH	POX (DUG SOUTH OF 20X HAMILTON ca ¼ MILE)
ARCIA 69 A	WHT	+60	NONE	GOOD	? (FROM FILTER)	20X/Rd	5.5	STORED	20X
ARCIA 69 B	WHT	-50	NONE	GOOD	ORG (FROM FILTER)	20X/Rd	3.0	FRESH	20X/Rd
ARCIA 69 C	WHT	-255	NONE	GOOD	REO-ORG	20X/Rd	6.0	STORED	20X/Rd
OBERLAND #76	WHT	+120	NONE	GOOD	?	20X/POX	3.0	FRESH	20X/POX
M. OBERLAND #77	WHT	+135	NONE	?	?	20X/Rd	3.0	FRESH	20X/POX
WILLIAMS #144	WHT	-155	NONE	GOOD	?	20X/Rd	5.5	STORED	20X/Rd
JAY #150	WHT	+40	NONE	GOOD	?	?	3.5	FRESH	20X/POX
JAY #152	WHT	+190	NONE	?	?	?	5.5	STORED	20X/POX
ALAZAR #151	WHT	-120	NONE	GOOD	?	?	5.5	FRESH	20X/Rd
RADFORD 1½ MILE	ORK-BWN	-175	STRONG H_2S	SULPHVR	GRY	20X/Rd	3.5	FRESH	Rd

Note: (BWN indicates presence of H_2S)

Ftn. 6

00081

Are the Wells Listed as #69A, #69B and #69C one well?. If yes, Which Garcia Hill Well?. If not, Which Wells are they?.

Exhibit B Kingsville Dome

5/21/87	pH	Conduct	U_3O_8	$NaHCO_3$	SO_4	Cl^-
arole Bries # 19	7.51	1991	0.12	432	248	
Huff # 79	7.83	2160	0.00	334	447	
5/22/87						
Garcia #69A	7.74	1580	0.05	432	210	
Garcia #69B	7.86	1500	0.08	460	184	
D. Rosse # 72	8.64	1590	0.00	Na_2CO_3 = 35 376	187	
Collins # 73	7.89	1420	0.10	488	104	
J. Larfin # 74	7.83	2430	0.07	279	545	
5/26/87						
Garcia # 69C	7.97	1600	0.05	446	209	
Cumberland # 76	7.84	1540	0.10	432	210	239
Cumberland # 77	7.84	1470	0.07	474	156	246
Williams # 144	7.91	1800	0.00	460	179	
C. E. May # 150	7.97	1730	0.08	418	241	
A. Salazar # 151	7.56	1710	0.03	446	244	
May # 152	7.92	1760	0.05	460	184	
[illegible]dford Windmill	8.65	1630	0,00	362	35*	

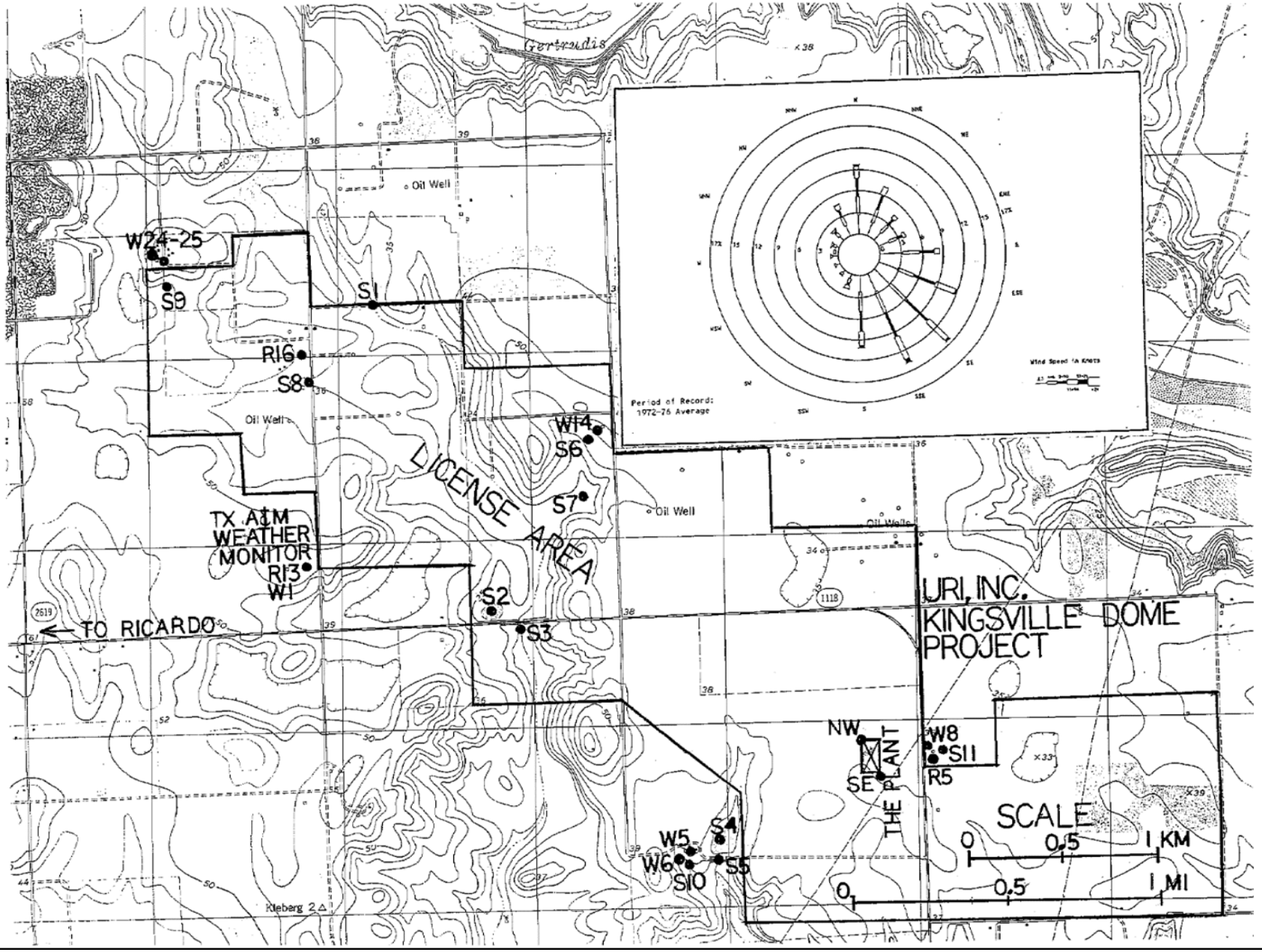
* Approximate Value

RECEIVED JUN - 2 1997

S-DM9

Prot. 10

It appears that these Lab results were not taken into account In the "Historical Uranium Concentrations" Table and Graph shown below.



1998 Environmental Monitoring Locations Map submitted to TDH. The W-20 well is missing from map.

GROUND WATER ANALYSIS REPORT–IN SITU MINING–URANIUM

COMPANY: URI, INC. REPORT DATE: APRIL 21, 1998
IDENTIFICATION: KVD GARCIA W~~24~~20~~25~~ ← No justification for Well Name change provided
2-25-98
LABORATORY: JORDAN LABORATORIES, INC.

MAJOR AND SECONDARY CONSTITUENTS

ITEM	MG/L	EPM	CONDUCTANCE	%EPM
CALCIUM(CA)	19	0.95	49.40	6.17
MAGNESIUM(MG)	6.3	0.52	24.23	3.38
SODIUM(NA)	315	13.70	669.93	89.02
POTASSIUM(K)	8.6	0.22	15.84	1.43
TOTAL CATION		15.39		
CARBONATE(CO3)	0	0.00	0.00	0.00
BICARBONATE(HCO3)	304	4.98	217.13	32.21
SULFATE(SO4)	193	4.02	297.08	26.00
CHLORIDE(CL)	229	6.46	490.31	41.79
NITRATE(NO3–N)				
FLUORIDE(F)			TOTAL 1763.92	
SILICA(SIO2)	18			
TOTAL ANION		15.46		
TOTAL ION	1093			

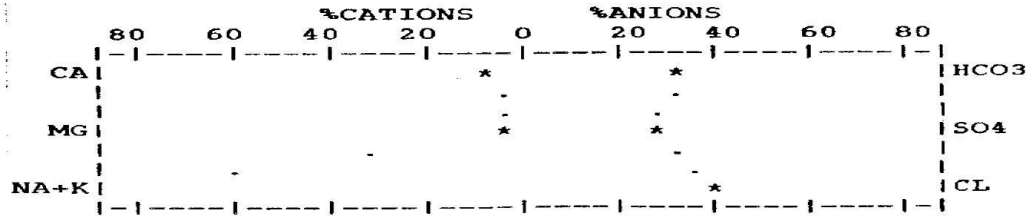
		ACCURACY CHECK	RANGE
TDS(180 C)	923	ION	0.995 (.96 TO 1.04)
TOT ION–0.5 HCO3=	941	TDS	0.981 (.90 TO 1.10)
EC(25 C)	1630 UMHOS	EC	1.004 (.95 TO 1.05)
EC(DIL)=106.0 X 16.7 =	1770 UMHOS		
ALK. AS CACO3	249		
PH	8.05		

RADIATION–PICOCURIES/LITER

GROSS ALPHA	88	+/–	9
GROSS BETA	32	+/–	4
→ RADIUM 226	0.7	+/–	0.1 ←

MINOR AND TRACE CONSTITUENTS

ITEM	MG/L	ITEM	MG/L	ITEM	MG/L
ARSENIC(AS)		MANGANESE(MN)		VANADIUM(V)	
BARIUM(BA)		MERCURY(HG)		ZINC(ZN)	
CADMIUM(CD)		MOLY.(MO)		BORON(B)	
CHROM.(CR)		NICKEL(NI)		AMMONIA–N	
COPPER(CU)		SELENIUM(SE)			
IRON(FE)		SILVER(AG)			
LEAD(PB)		→ URANIUM(U)	0.189 ←		



ANALYST:

NIXON AND ALLEN

CHECKED BY:

LAB.NO:M36–1627

Rev. 5-19-98

Kingsville Dome Project
RIX1 Baseline Analysis

Lab Report says → W24/W25

Sample	Ref*	Rn-222	Date	Ra-226 T	Date	Ra-226 S	Date	U	Date	G-Alpha	Date	G-Beta	Date	Pb-210	Date	Gamma	Date	Cond.	Date	pH	Date
Air	R3	IN PROGRESS																			
	R4	IN PROGRESS																			
	R13	.3 pCi/l	4-1-98																		
	R16	.4 pCi/l	4-1-98																		
Groundwater	WW1			0.1 pCi/l	2-25-98			.013 ppm	2-25-98	7.3 pCi/l	2-25-98	25 pCi/l	2-25-98					1570 uMho	2-25-98	8.26	2-25-98
	WW20			0.7 pCi/l	2-25-98			.189 ppm	2-25-98	88 pCi/l	2-25-98	32 pCi/l	2-25-98					1630 uMho	2-25-98	8.05	2-25-98
Surface Water	S1			0.5 pCi/l	2-18-98			<.001 ppm	2-18-98	3.5 pCi/l	2-18-98	22 pCi/l	2-18-98					143 uMho	2-18-98	7.63	2-18-98
	S2			0.5 pCi/l	11-6-97			.002 ppm	11-6-97	3.2 pCi/l	11-6-97	16 pCi/l	11-6-97					1810 uMho	11-6-97	6.72	11-6-97
	S3			0.3 pCi/l	2-18-98			0.01 ppm	2-18-98	7.3 pCi/l	2-18-98	19 pCi/l	2-18-98					3710 uMho	2-18-98	7.57	2-18-98
Soil	R13													0.8 pCi/l	9-11-97						
	R16													0.8 pCi/l	9-11-97						
	R3													IN PROGRESS							
	R4													IN PROGRESS							
	RIX1 0-6"			0.4 pCi/g	4-20-98			.78 ppm	4-20-98												
	RIX1 6-12"			0.4 pCi/g	4-20-98			.78 ppm	4-20-98												
Vegetation	R3													NO VEGETATION							
	R4													NO VEGETATION							
	R13													0.7 pCi/l	9-11-97						
	R16													0.6 pCi/l	9-11-97						
Gamma	R3															IN PROGRESS					
	R4															IN PROGRESS					
	R13															1.06 mR/wk	4-7-98				
	R16															1.23 mR/wk	4-7-98				
Sediment	S1			0.5 pCi/g	5-23-97	.011pCi/g	5-23-97	1.2 ppm	5-23-97												
	S2			0.3 pCi/g	5-23-97	.001pCi/g	5-23-97	1.1 ppm	5-23-97												
	S3			0.7 pCi/g	5-23-97	.004pCi/g	5-23-97	3.0 ppm	5-23-97												

* See map for reference locations.

TEL. 512-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INC.
CHEMISTS AND ENGINEERS
CORPUS CHRISTI, TEXAS
MAY 12, 1988

URI, INC.
12377 MERIT DR., SUITE 750, LB14
DALLAS, TEXAS 75251

REPORT OF ANALYSIS

IDENTIFICATION: A. GARCIA
3-31-88 ←

		ANALYSIS DATE
PH	8.19	4-04-88
SPECIFIC CONDUCTANCE 1640 UMHOS/CM @ 25 DEG.C.		4-27-88
	MG/L	
TOTAL DISSOLVED SOLIDS (180 DEG.C.)	974	4-11-88
ARSENIC	0.003	4-08-88
COPPER	<0.01	5-03-88
MOLYBDENUM	0.01	5-03-88
SELENIUM	0.003	4-08-88
→ URANIUM (NATURAL)	0.011	4-18-88
GROSS ALPHA ACTIVITY, PCI/L	9.2 +/- 11	4-27-88
GROSS BETA ACTIVITY, PCI/L	6.3 +/- 6.2	4-27-88
RADIUM 226, PCI/L	1.1 +/- 0.2	4-13-88
THORIUM 230, PCI/L	-0.4 +/- 0.7	5-12-88

LAB. NO. M26-2219

It appears that these Lab results were not taken into account in the "Historical Uranium Concentrations" Table and Graph shown below.

RESPECTFULLY SUBMITTED,

CARL F. CROWNOVER

Which Garcia Hill well is the A. (Armando?) García Well: W-25?.

TEL. 512-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INC.
CHEMISTS AND ENGINEERS
CORPUS CHRISTI, TEXAS
MAY 12, 1988

URI, INC.
12377 MERIT DR., SUITE 750, LB14
DALLAS, TEXAS 75251

REPORT OF ANALYSIS

IDENTIFICATION: Y.C. GARCIA
3-31-88 ←

			ANALYSIS DATE
PH	8.24		4-04-88
SPECIFIC CONDUCTANCE 1550 UMHOS/CM @ 25 DEG.C.			4-27-88
		MG/L	
TOTAL DISSOLVED SOLIDS (180 DEG.C.)		858	4-11-88
ARSENIC		<0.001	4-08-88
COPPER		<0.01	5-03-88
MOLYBDENUM		0.08	5-03-88
SELENIUM		0.010	4-08-88
→ URANIUM (NATURAL)		0.032	4-18-88
GROSS ALPHA ACTIVITY, PCI/L	22 +/- 13		4-27-88
GROSS BETA ACTIVITY, PCI/L	21 +/- 7		4-27-88
RADIUM 226, PCI/L	3.2 +/- 0.2		4-13-88
THORIUM 230, PCI/L	0.6 +/- 0.9		5-12-88

LAB. NO. M26-2220

It appears that these Lab results were not taken into account in the "Historical Uranium Concentrations" Table and Graph shown below.

RESPECTFULLY SUBMITTED,

CARL F. CROWNOVER

Which Garcia Hill Well is the Y. G. Garcia Well: W-20?.

GROUND WATER ANALYSIS REPORT-IN SITU MINING-URANIUM

COMPANY: URI, INC. REPORT DATE: APRIL 21, 1998
IDENTIFICATION: KVD GARCIA ~~W24-25~~ 20
2-25-98
LABORATORY: JORDAN LABORATORIES, INC.

MAJOR AND SECONDARY CONSTITUENTS

ITEM	MG/L	EPM	CONDUCTANCE	%EPM
CALCIUM(CA)	19	0.95	49.40	6.17
MAGNESIUM(MG)	6.3	0.52	24.23	3.38
SODIUM(NA)	315	13.70	669.93	89.02
POTASSIUM(K)	8.6	0.22	15.84	1.43
	TOTAL CATION	15.39		
CARBONATE(CO3)	0	0.00	0.00	0.00
BICARBONATE(HCO3)	304	4.98	217.13	32.21
SULFATE(SO4)	193	4.02	297.08	26.00
CHLORIDE(CL)	229	6.46	490.31	41.79
NITRATE(NO3-N)				
FLUORIDE(F)		TOTAL	1763.92	
SILICA(SIO2)	18			
	TOTAL ANION	15.46		

TOTAL ION	1093		
TDS(180 C)	923		
TOT ION-0.5 HCO3=	941		
EC(25 C)	1630 UMHOS		
EC(DIL)=106.0 X 16.7 =	1770 UMHOS		
ALK. AS CACO3	249		
PH	8.05		

ACCURACY CHECK

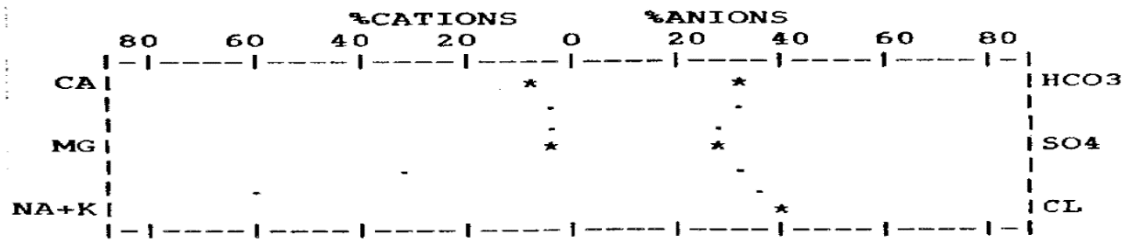
		RANGE
ION	0.995	(.96 TO 1.04)
TDS	0.981	(.90 TO 1.10)
EC	1.004	(.95 TO 1.05)

RADIATION-PICOCURIES/LITER

GROSS ALPHA	88	+/-	9
GROSS BETA	32	+/-	4
→ RADIUM 226	0.7	+/-	0.1 ←

MINOR AND TRACE CONSTITUENTS

ITEM	MG/L	ITEM	MG/L	ITEM	MG/L
ARSENIC(AS)		MANGANESE(MN)		VANADIUM(V)	
BARIUM(BA)		MERCURY(HG)		ZINC(ZN)	
CADMIUM(CD)		MOLY.(MO)		BORON(B)	
CHROM.(CR)		NICKEL(NI)		AMMONIA-N	
COPPER(CU)		SELENIUM(SE)			
IRON(FE)		SILVER(AG)			
LEAD(PB)		→ URANIUM(U)	0.189 ←		

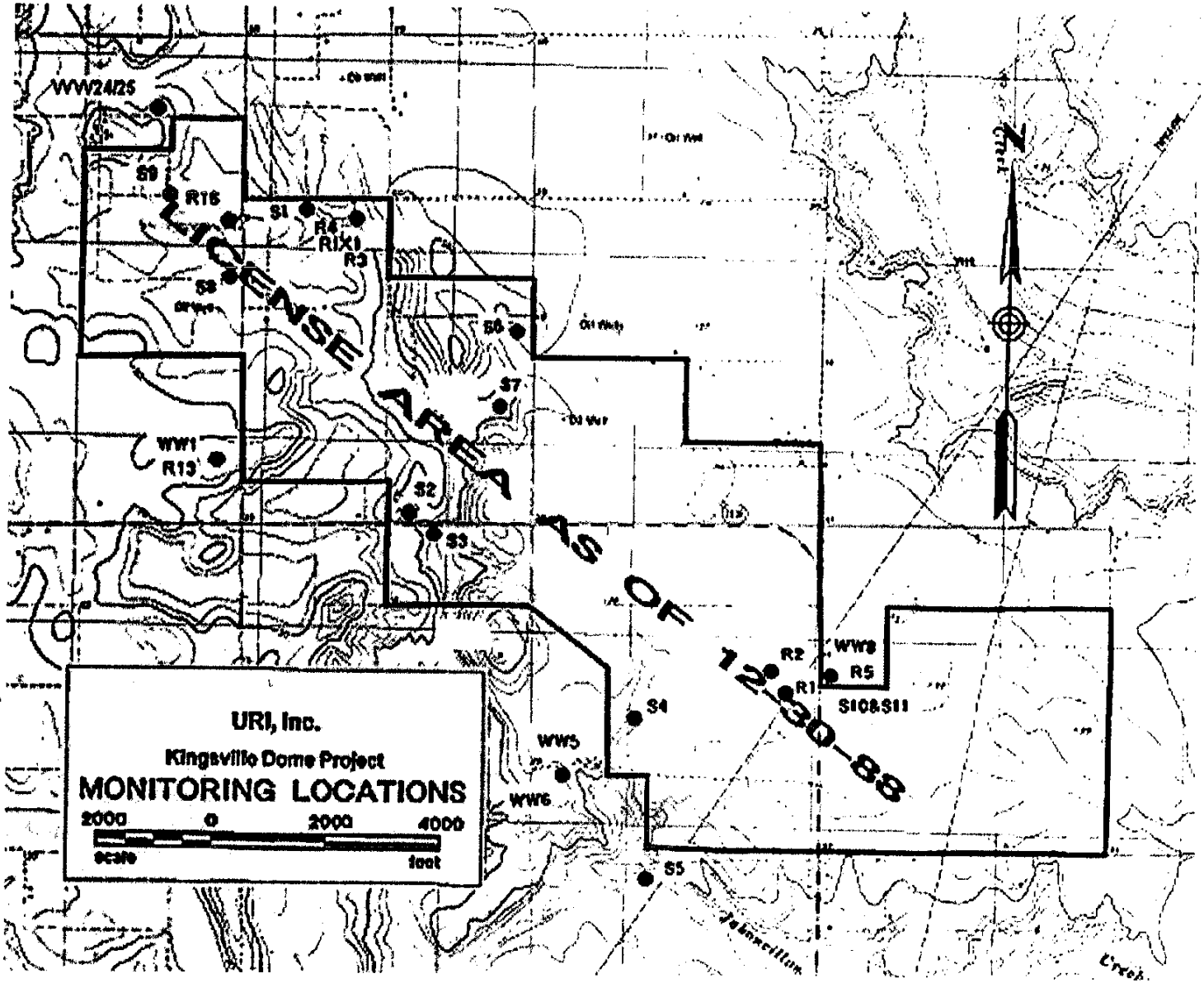


ANALYST:

NIXON AND ALLEN

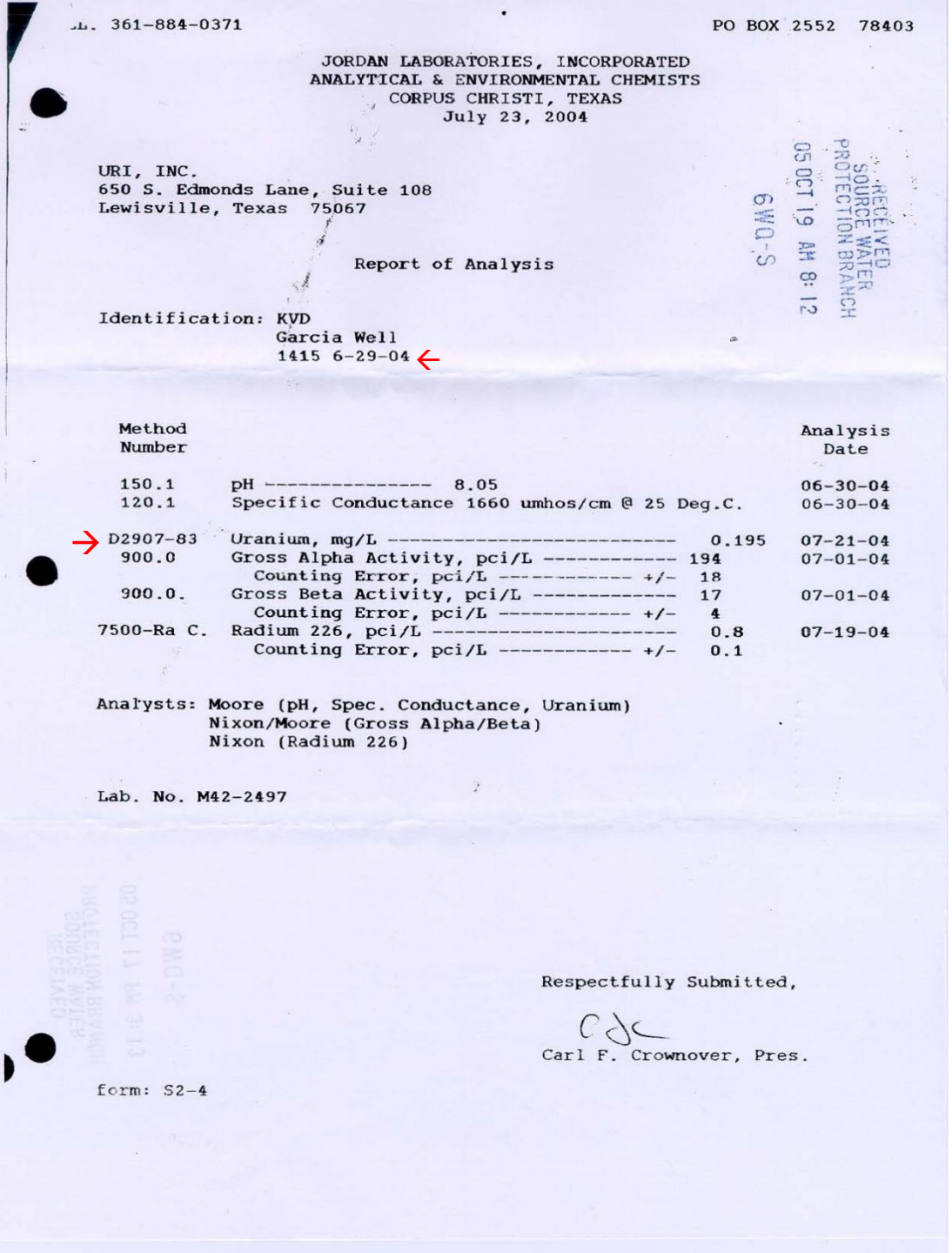
CHECKED BY:

LAB.NO:M36-1627


WW24/25
S9
R16
S1
R4
R1X1
R3
S8
S6
S7
WW1
R13
S2
S3
LICENSE AREA AS OF 12-30-88
R2
WW8
R5
R1
S10&S11
S4
WW5
WW6
S5
URI, Inc.
Kingsville Dome Project
MONITORING LOCATIONS
2000
0
2000
4000
scale
feet
N
Creek

Is this the “KVD” Garcia Well” the W-24 Well?.

When was the last time that the W-25 Well pumped water to the tank?.



LL. 361-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INCORPORATED
ANALYTICAL & ENVIRONMENTAL CHEMISTS
CORPUS CHRISTI, TEXAS
July 23, 2004

RECEIVED
SOURCE WATER
PROTECTION BRANCH
05 OCT 19 AM 8:12
6WQ-S

URI, INC.
650 S. Edmonds Lane, Suite 108
Lewisville, Texas 75067

Report of Analysis

Identification: KVD
Garcia Well
1415 6-29-04

Method Number			Analysis Date
150.1	pH	8.05	06-30-04
120.1	Specific Conductance 1660 umhos/cm @ 25 Deg.C.		06-30-04
D2907-83	Uranium, mg/L	0.195	07-21-04
900.0	Gross Alpha Activity, pci/L	194	07-01-04
	Counting Error, pci/L +/-	18	
900.0.	Gross Beta Activity, pci/L	17	07-01-04
	Counting Error, pci/L +/-	4	
7500-Ra C.	Radium 226, pci/L	0.8	07-19-04
	Counting Error, pci/L +/-	0.1	

Analysts: Moore (pH, Spec. Conductance, Uranium)
Nixon/Moore (Gross Alpha/Beta)
Nixon (Radium 226)

Lab. No. M42-2497

Respectfully Submitted,

Carl F. Crownover, Pres.

form: S2-4

It is the tank

URI/Kingsville Dome Project
Combined W-24 &W-25 Garcia Hills Domestic Wells Water Quality Data

Sample ID	Uranium (mg/l)	Gross Alpha (pCi/l)	Gross Beta (pCi/l)	Radium 226 (pCi/l)	Specific conductance and PH
12/13/96	0.184	108(+/-)10	45 (+-) 5	0.7 (+-) 0.1	1660 / 8.14
5/23/97	0.220	124 (+-) 11	40 (+-) 5	0.7 (+-) 0.1	1570 / 8.18
8/29/97	0.152	67 (+-) 8	45 (+-) 5	0.5 (+-) 0.1	1620 / 8.18
2/25/98	0.189	88 (+-) 9	32 (+-) 4	0.7 (+-) 0.1	1630 / 8.05
W-24 only 6/18/98	0.152	103 (+-) 10	37 (+-) 5	0.8 (+-) 0.1	1640 / 8.14
W-25 only 6/18/98	0.167	102 (+-) 10	30 (+-) 5	0.9 (+-) 0.1	1630 / 8.20
8/27/98	0.158	94 (+-) 10	36 (+-) 5	0.7 (+-) 0.1	1660 / 8.21
11/25/98	0.209	111 (+-) 10	48 (+-) 5	0.7 (+-) 0.1	1630 / 8.04
3/26/99	0.200	99 (+-) 10	45 (+-) 5	1.2 (+-) 0.1	1620 / 8.15
6/21/99	0.181	96 (+-) 10	49 (+-) 5	0.7 (+-) 0.1	1630 / 8.09
8/24/00	0.151	71 (+-) 8	24 (+-) 4	0.9 (+-) 0.1	1560 / 8.28
9/19/00(Split with TDH)	0.187	Na	Na	0.4 (+-) 0.1	1600 / 8.30
11/6/00	0.168	72 (+-) 7	31 (+-) 5	0.9 (+-) 0.1	Na
2/19/01	0.184	78 (+-) 7	24 (+-) 4	0.7 (+-) 0.1	1570 / 8.15
06/11/01	0.179	72 (+-) 7	38 (+-) 4	0.8 (+-) 0.1	1510 / 8.03
9/13/01	0.160	81 (+-) 8	32 (+-) 4	0.8 (+-) 0.1	1430 / 8.03
12/17/01	0.240	113 (+-) 9	26 (+-) 5	0.9 (+-) 0.1	1610 / 0.1
3/21/02	0.164	89 (+-) 9	33 (+-) 4	0.8 (+-) 0.1	1680 / 8.16
6/26/02	0.141	74 (+-) 8	22 (+-) 4	0.6 (+-) 0.1	1720 / 8.17
9/30/02	0.172	82 (+-) 8	11 (+-) 3	0.8 (+-) 0.1	1660 / 8.13
12/13/02	0.188	126 (+-) 10	28 (+-) 4	0.7 (+-) 0.1	1590 / 8.13

Compare to WQ data for 1988 provided by Teo Saenz on 10/09/05
VET

TEL. 361-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INCORPORATED
ANALYTICAL & ENVIRONMENTAL CHEMISTS
CORPUS CHRISTI, TEXAS
June 06, 2006

URI, INC.
650 S. Edmonds Lane, Suite 108
Lewisville, Texas 75067

Report of Analysis

Identification: KVD 2nd Qtr. Ground Water
Cumberland Well
5-15-06

Which Cumberland Well is this?.

Method Number			Analysis Date
150.1	pH	7.72	05-16-06
120.1	Specific Conductance	1560 umhos/cm @ 25 Deg.C.	05-16-06
D2907	Uranium, mg/L	0.012	06-05-06 ←
900.0	*Gross Alpha Activity, pci/L	21	05-18-06
	Counting Error, pci/L	+/- 7	
900.0.	*Gross Beta Activity, pci/L	7.9	05-18-06
	Counting Error, pci/L	+/- 3.1	
7500-Ra C.	Radium 226, pci/L	0.6	05-30-06
	Counting Error, pci/L	+/- 0.1	

Analysts: Nixon & Moore
Calibration: Alpha - Th230 Beta - Cs137

*Note: EPA Method 900.0 is a drinking water screening procedure. Its application to waters of high total dissolved solids may result in unacceptably high counting errors due to limitation on sample size. Recommended max is 500 mg/L.

Alternate method for determining activity may be considered.

Lab. No. M44-1406

Respectfully Submitted,

CFC

Carl F. Crownover, Pres.

form: S2-4

TEL. 361-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INCORPORATED
ANALYTICAL & ENVIRONMENTAL CHEMISTS
CORPUS CHRISTI, TEXAS
June 06, 2006

URI, INC.
650 S. Edmonds Lane, Suite 108
Lewisville, Texas 75067

Report of Analysis

Identification: KVD 2nd Qtr. Ground Water
Garcia Well
5-15-06

Garcia Hill
W-24

Method Number			Analysis Date
150.1	pH ---------- 7.82		05-16-06
120.1	Specific Conductance 1610 umhos/cm @ 25 Deg.C.		05-16-06
D2907	Uranium, mg/L ----------	0.730	06-05-06 ←
900.0	*Gross Alpha Activity, pci/L ----------	677	05-18-06
	Counting Error, pci/L ---------- +/-	30	
900.0.	*Gross Beta Activity, pci/L ----------	53	05-18-06
	Counting Error, pci/L ---------- +/-	5	
7500-Ra C.	Radium 226, pci/L ----------	1.2	05-30-06
	Counting Error, pci/L ---------- +/-	0.1	

Analysts: Nixon & Moore
Calibration: Alpha - Th230 Beta - Cs137

*Note: EPA Method 900.0 is a drinking water screening procedure. Its application to waters of high total dissolved solids may result in unacceptably high counting errors due to limitation on sample size. Recommended max is 500 mg/L.

Alternate method for determining activity may be considered.

Lab. No. M44-1407

Respectfully Submitted,

Carl F. Crownover, Pres.

form: S2-4

TEL. 361-884-0371 PO BOX 2552 78403

JORDAN LABORATORIES, INCORPORATED
ANALYTICAL & ENVIRONMENTAL CHEMISTS
CORPUS CHRISTI, TEXAS
June 06, 2006

URI, INC.
650 S. Edmonds Lane, Suite 108
Lewisville, Texas 75067

Report of Analysis

Identification: KVD 2nd Qtr. Ground Water
Lehman Well
5-15-06

Method Number			Analysis Date
150.1	pH	8.13	05-16-06
120.1	Specific Conductance	2060 umhos/cm @ 25 Deg.C.	05-16-06
D2907	Uranium, mg/L	0.002	06-05-06
900.0	*Gross Alpha Activity, pci/L	9.5	05-18-06
	Counting Error, pci/L	+/- 6.3	
900.0.	*Gross Beta Activity, pci/L	5.4	05-18-06
	Counting Error, pci/L	+/- 3.5	
7500-Ra C.	Radium 226, pci/L	0.2	05-30-06
	Counting Error, pci/L	+/- 0.1	

Analysts: Nixon & Moore
Calibration: Alpha - Th230 Beta - Cs137

*Note: EPA Method 900.0 is a drinking water screening procedure. Its application to waters of high total dissolved solids may result in unacceptably high counting errors due to limitation on sample size. Recommended max is 500 mg/L.

Alternate method for determining activity may be considered.

Lab. No. M44-1408

Respectfully Submitted,

Carl F. Crownover, Pres.

form: S2-4

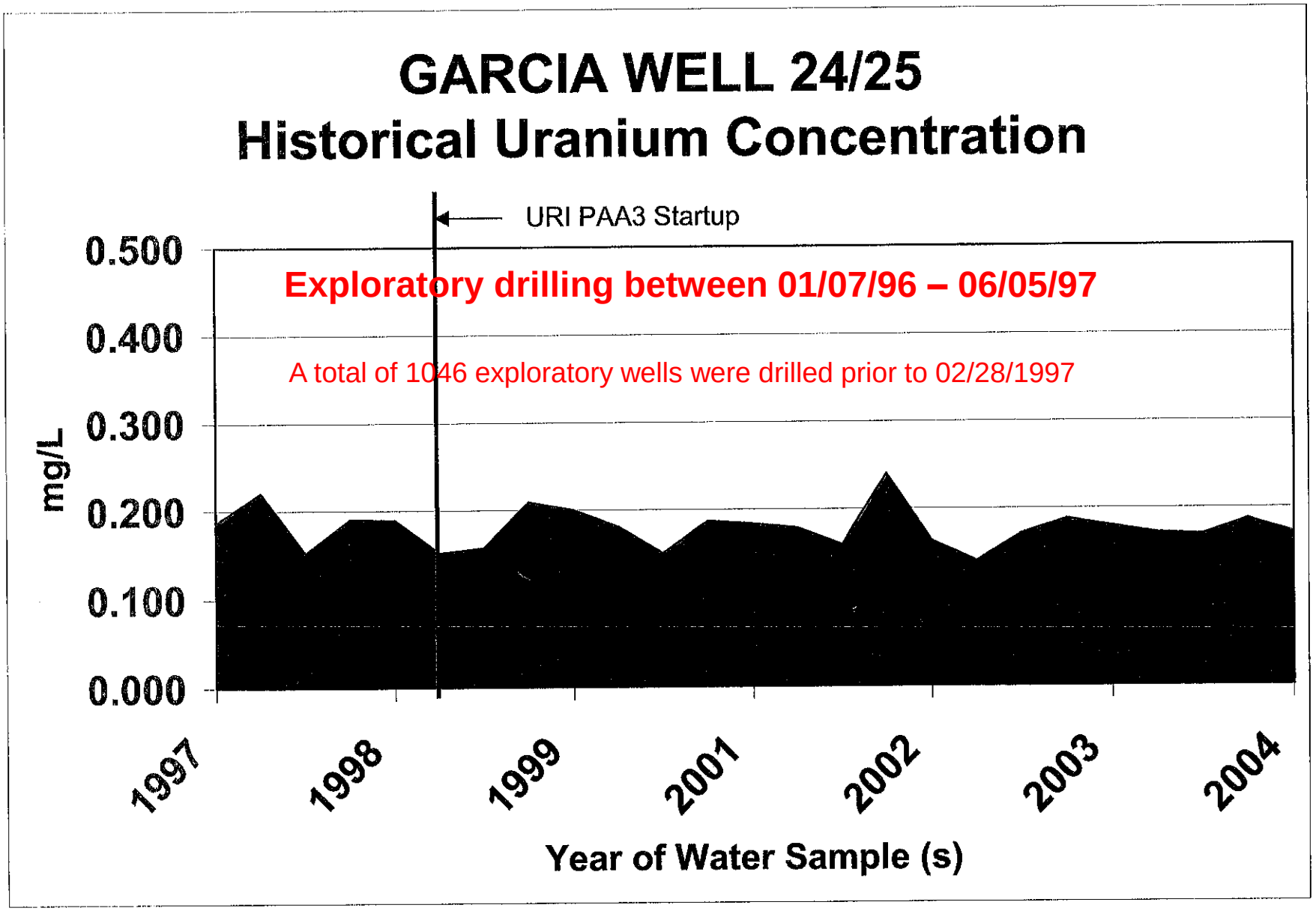
Lehman Well (Location?, South Block 41?, Schematic?).

Whose Report is this and when was it completed?

Environmental Report Rev. 2.0

5.0 URI, INC. - KVD
Groundwater Sampling
SUMMARY - Garcia Well #24/25 ←

Year	DATE	Quarter	pH	umhos/cm COND.	PCi/L G. ALPHA Reading	+/-	PCi/L G. BETA Reanding	+/-	Mg/L U	PCi/L RADIUM Reading	+/-
		Baseline									
1997	4/4/1997	1	8.18	1620	104.0	10.0	29.0	5.0	0.186	0.4	0.1
1997	5/23/1997	2	8.18	1570	124.0	11.0	50.0	5.0	0.220	0.9	0.1
1997	8/29/1997	3	8.18	1620	67.0	8.0	45.0	5.0	0.152	0.5	0.1
1997	12/9/1997	4	8.03	1650	121.0	11.0	57.0	6.0	0.190	0.8	0.1
→ 1998	2/25/1998	1	8.05	1630	88.0	9.0	32.0	4.0	0.189	0.7	0.1 ←
1998	6/18/1998	2	8.14	1640	103.0	10.0	37.0	5.0	0.152	0.8	0.1
1998	8/27/1998	3	8.21	1660	94.0	10.0	36.0	5.0	0.158	0.7	0.1
1998	11/25/1998	4	8.04	1630	111.0	10.0	48.0	5.0	0.209	0.7	0.1
1999	3/26/1999	1	8.15	1620	99.0	10.0	42.0	5.0	0.200	1.2	0.1
1999	6/21/1999	2	8.09	1630	96.0	10.0	49.0	2.0	0.181	0.7	0.1
2000	8/24/2000	3	8.28	1560	71.0	8.0	24.0	4.0	0.151	0.9	0.1
2000	9/19/2000	3	8.30	1600	72.0	7.0	31.0	5.0	0.187	0.4	0.1
2001	2/19/2001	1	8.15	1570	78	7	27	4	0.184	0.7	0.1
2001	6/11/2001	2	8.03	1510	72	7	38	4	0.179	0.8	0.1
2001	9/13/2001	3	8.03	1430	81	8	32	4	0.160	0.8	0.1
2001	12/17/2001	4	8.15	1610	113	9	26	5	0.240	0.9	0.1
2002	3/21/2002	1	8.16	1680	89	9	33	4	0.164	0.8	0.1
2002	6/26/2002	2	8.17	1720	74	8	22	4	0.141	0.6	0.1
2002	9/30/2002	3	8.13	1660	82	8	11	3	0.172	0.8	0.1
2002	12/13/2002	4	8.13	1590	126	10	28	4	0.188	0.7	0.1
2003	3/11/2003	1	8.27	1760	134	11	29	4	0.18	0.7	0.1
2003	6/23/2003	2	8.11	1600	78	8	19	4	0.172	0.7	0.1
2003	9/26/2003	3	8.2	1710	135	14	21	4	0.17	0.6	0.1
2003	12/12/2003	4	8.05	1630	118	13	22	4	0.187	0.8	0.1
2004	3/31/2004	1	8.05	1670	136	13	16	4	0.172	0.9	0.1



From "Environmental Report, Rev. 2.0" - Author?, Date?.

How did this report account for the Lab results seen in the previous slides?, and if it didn't, Why?

U concentrations presented in Unconventional Units:

µCi/ml

Need to convert to more customary

mg/L or µg/L

for valid comparisons.

Need to research appropriate Units Conversion Factor.

Rev. 02/24/05

(512) 834-6688

TEXAS DEPARTMENT OF STATE HEALTH SERVICES
1100 W. 49TH STREET
AUSTIN, TEXAS 78756

Lab Number

Date Received: MAR 1

Radiation Branch

Urgent Processing Authorized By:

☒ Routine ○ Urgent ○ Priority (half-life)

Licensee/Facility Name: ORI

License No: L03653

Site No: 002

Sample No. 1 of 2

Station No: N/A

Sample Description: Garcia Well Capt. Agriculture

Sample Code: W/A

Reason for Sampling: C-2056

Sample Location: Garcia well was used for cattle 14R 617060 3035748

Sample Collection Date: 2/23/07 Time: 1800

Sample Collector Name: R Carter

Radiation Survey of Sample: < 5.0 ○ mR/hr ☒ uR/hr ○ cpm

Notes:

The following certify, by their signature(s), that they were continuously in control of this sample until transferred to the next indicated person:

Transfer from	To	Date	Time
Luke	Carter	2/27/07	1200
Carter	Fed Ex	3/1/07	0800

Condition of Seals:

☒ Satisfactory ○ Unsatisfactory

RECEIVED APR 26 2007 INSPECTION UNIT

Wet weight:

Ash Weight: Dry Weight:

Notes:

I certify that this sample was continuously in my custody from the time and date of receipt listed hereon until the completion of laboratory analysis.

Signature Virginia Kannenberg

Date: Approved 4-24-07 Reported APR 26 2007

Copies:

☒ License file L03653 ○ Facility file

☒ Incident/complaint file ○ Other

○ Collector

○ Routing:

Environmental Sciences Branch

○ Chemical Analysis Also Performed

Suspected Radionuclides: Ra + Uranium

Check the required analyses:

Radionuclide	Analyses	Units
☒ Gamma Scan:	3-14-07	
K-40	$1.7 \times 10^{-8} \pm 8 \times 10^{-9}$	uCi/ml
U-235	$1.3 \times 10^{-8} \pm 1 \times 10^{-9}$	uCi/
U-238	$1.21 \times 10^{-7} \pm 1.7 \times 10^{-8}$	uCi/
Ra-226	$< 4.1 \times 10^{-8}$	uCi/
COMPLAINT	2056	uCi/
ROUTE		uCi/
REGION	11	uCi/
RF HW JO	ZH	uCi/
INCIDENT		uCi/

←

Beta Analysis:

○ Gross Beta uCi/

○ Tritium uCi/

○ uCi/

Alpha Analysis:

☒ Gross Alpha	$5.89 \times 10^{-7} \pm 2.2 \times 10^{-8}$	uCi/ml
☒ Radium-226	$1.3 \times 10^{-9} \pm 3 \times 10^{-10}$	uCi/ml
☒ Total Uranium	$4.93 \times 10^{-7} \pm 1.5 \times 10^{-8}$	uCi/ml

☒ Alpha Spectroscopy:

U-234	$2.24 \times 10^{-7} \pm 7 \times 10^{-9}$	uCi/ml
U-235	$1.1 \times 10^{-8} \pm 2 \times 10^{-9}$	uCi/ml
U-238	$2.57 \times 10^{-7} \pm 8 \times 10^{-9}$	uCi/ml

○ Regulatory limits WERE exceeded.
○ Regulatory limits WERE NOT exceeded.
Signature
Date

Disposal:
○ Rad Waste ○ Non-Radioactive
○ To Licensee ○ Decay
○ Other

Texas Department of State Health Services Laboratory

1100 West 49th Street
Austin, Texas 78756-3194

Environmental Sciences Branch
Radiochemical Analysis Report

Tel. (512) 458-7587
FAX (512) 458-7757

TDH Sample Number: 08EX-273
Sample Type: Water
Submitter: Armando Garcia
Submitter ID: 418 Garcia Hill Rd.
Kingsville, Tx. 78363

Date Collected: 07/14/2008
Date Received: 07/15/2008

Procedure	Activity	Uncertainty	Units	Method	Analysis Date	Analyst
Gross Alpha	Not Required		pCi/ liter	EPA 900		
Gross Beta	Not Required		pCi/ liter	EPA 900		
Total Radium	Not Required		pCi/ liter	EPA 903		
Ra-226	Not Required		pCi/ liter	SM 7500-Ra C		
Ra-228	Not Required		pCi/ liter	SM 7500-Ra D		
Radon	Not Required		pCi/ liter	LUCAS Method		
Tritium	Not Required		pCi/ liter	EPA 906		
Total Uranium	822.0	75.0	µg/ liter	SM 7500-U C	18-Aug-2008	SJG
Strontium-89	Not Required		pCi/ liter	EPA 905		
Strontium-90	Not Required		pCi/ liter	EPA 905		
Carbon-14	Not Required		pCi/ liter	EPA EERF C-01-1		

Gamma Spectroscopy

Analysis Date:
Analyst:
Units: pCi/ liter
Methods: EPA 901.1
Weight/Volume:

Results Decay Corrected to Date of Sample Collection

Isotope	Activity	Uncertainty
	Not Required	
	Not Required	
	Not Required	
	Not Required	
	Not Required	
	Not Required	
	Not Required	
Mn-54	Not Required	
Co-58	Not Required	
Fe-59	Not Required	
Co-60	Not Required	
Nb-95	Not Required	
Zr-95	Not Required	
I-131	Not Required	
Cs-134	Not Required	
Cs-137	Not Required	
Ba-140	Not Required	
La-140	Not Required	

Alpha Spectroscopy

Analysis Date: 18-Aug-2008
Analyst (Prep): SJG
Analyst (Count): SJG
Units: pCi/ liter
Method: U. S. DOE Actinide Separations

Isotope	Activity	Uncertainty
U-234	248.0	24.9
U-235	12.2	2.6
U-238	274.0	24.8
Total	535.0	52.2

Notes:

Approval Signature:
Date Reported: AUG 22 2008

Date Approved: 8/21/08

Rev. 1 4-1-97

Need to confirm whether "Armando Garcia" refers to the W-25 Well.

There is no consistency in the way Garcia Wells are identified.

2.74*10^(-1) pCi/mL
2.74*10^(-7) µCi/mL

QUESTIONS ON:

Schedule of Operations
Operating Details

EPA, Region 6
Dallas, Texas

URI, INC.

(A Subsidiary of Uranium Resources, Inc.)

Kingsville Dome Project
640 East FM 1118
Kingsville, Texas 78363
Telephone: (361) 595-5731
Fax: (361) 595-0403

405 State Highway 121 Bypass
Building A, Suite 110
Lewisville, Texas 75067
Telephone: (972) 219-3330
Fax: (972) 219-3311

Rosita Project
3021 County Road 333
San Diego, Texas 78384
Telephone: (361) 279 - 3307
Fax: (361) 279 - 2260

November 28, 2011

Dr. Gary L. Smith, Section Manager
Uranium and Technical Assessment Section
Radioactive Materials Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

RE: Radioactive Material License L03653
Year 2011 Decommissioning Cost Estimate Adjustment

Dear Dr. Smith:

Site Number 001 Rosita.

Groundwater restoration was completed all three production areas at the Rosita site by 2008. On October 21, 2008, notice was given to the TCEQ that restoration was complete in production areas 1 and 2 and that stabilization sampling was to begin. URI has completed stability of groundwater restoration in production areas 1 and 2 as required by TCEQ regulations. On October 12, 2011 TCEQ approved the amended restoration tables for Production Area's 1 & 2 making the way for final closure of these production areas.

Please feel free to contact me with questions pertaining to this matter.

Sincerely,

Mark S. Pelizza
Sr. Vice President

Cc: Mark Stoebner - TCEQ
Thomas H. Ehrlich – URI
Rick Van Horn – URI

Letter documents TCEQ's approval of amendment to Restoration Tables in order to make possible the final closure of production areas by operator.

Is there similar correspondence available for KVD?.

Re: URI's KVD's PA3 New Wellfields - Lotus Notes

Re: URI's KVD's PA3 New Wellfields - Lotus Notes

File Edit View Create Actions Window Help

Workspace | Jose Torres - Inbox | Re: A Question | Re: URI's KVD's PA3 New Wellfi...

New | Reply | Reply to All | Forward | More | Records

Re: URI's KVD's PA3 New Wellfields

Muhammadali Abbaszadeh to: Jose Torres

Cc: Philip Dellinger, Ray Leissner, "Frank Espino"

03/12/2009 08:54 AM

Show Details

Mr. Torres,

Below is the production start and end dates for the well fields at Kingsville Dome site.

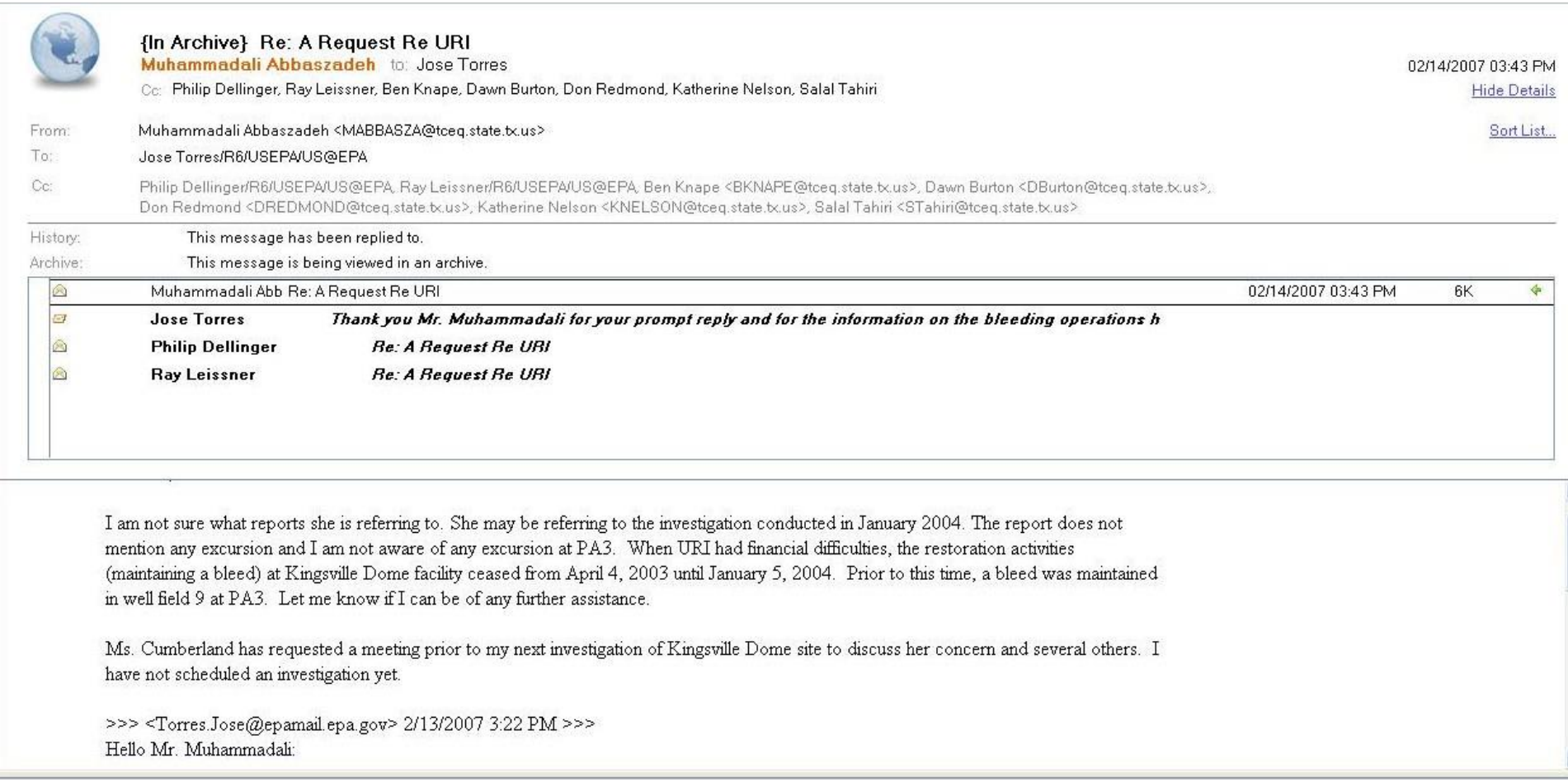
WF 9----------6/98-6/99
WF 10----------8/98-6/99
WF 11----------4/29/2006-9/11/2007
WF 12----------8/7/2006-9/11/2007
WF 13----------1/30/2007-12/7/2007
WF 14---------7/18/2007-6/18/2008
WF 15A-------1/18/2008-10/12/2008
WF 15B------- not producing yet
WF 16A----------12/22/2007-still producing
WF 16B----------7/9/2008-still producing
WF 17A-------4/22/2008-still producing
WF 17B-------10/8/2008-still producing

>>> <Torres.Jose@epamail.epa.gov> 3/10/2009 2:08 PM >>>
Mr. Muhammadali:

Thank you very much for the clarification. The fact that only

You have new mail on R6MAIL/R6/USEPA/US | Disconnected | DEFAULT

start | Re: URI's KVD's PA... | 1-2-3 - [R:\yr09\U... | Microsoft Photo Edi... | R:\yr09\URIcase | 090309EnvChemist... | 10:35 AM



{In Archive} Re: A Request Re URI

Muhammadali Abbaszadeh to: Jose Torres

Cc: Philip Dellinger, Ray Leissner, Ben Knape, Dawn Burton, Don Redmond, Katherine Nelson, Salal Tahiri

02/14/2007 03:43 PM

Hide Details

From: Muhammadali Abbaszadeh <MABBASZA@tceq.state.tx.us>

Sort List...

To: Jose Torres/R6/USEPA/US@EPA

Cc: Philip Dellinger/R6/USEPA/US@EPA, Ray Leissner/R6/USEPA/US@EPA, Ben Knape <BKNAPE@tceq.state.tx.us>, Dawn Burton <DBurton@tceq.state.tx.us>, Don Redmond <DREDMOND@tceq.state.tx.us>, Katherine Nelson <KNELSON@tceq.state.tx.us>, Salal Tahiri <STahiri@tceq.state.tx.us>

History: This message has been replied to.

Archive: This message is being viewed in an archive.

Muhammadali Abb	Re: A Request Re URI	02/14/2007 03:43 PM	6K
Jose Torres	*Thank you Mr. Muhammadali for your prompt reply and for the information on the bleeding operations h*		
Philip Dellinger	*Re: A Request Re URI*		
Ray Leissner	*Re: A Request Re URI*		

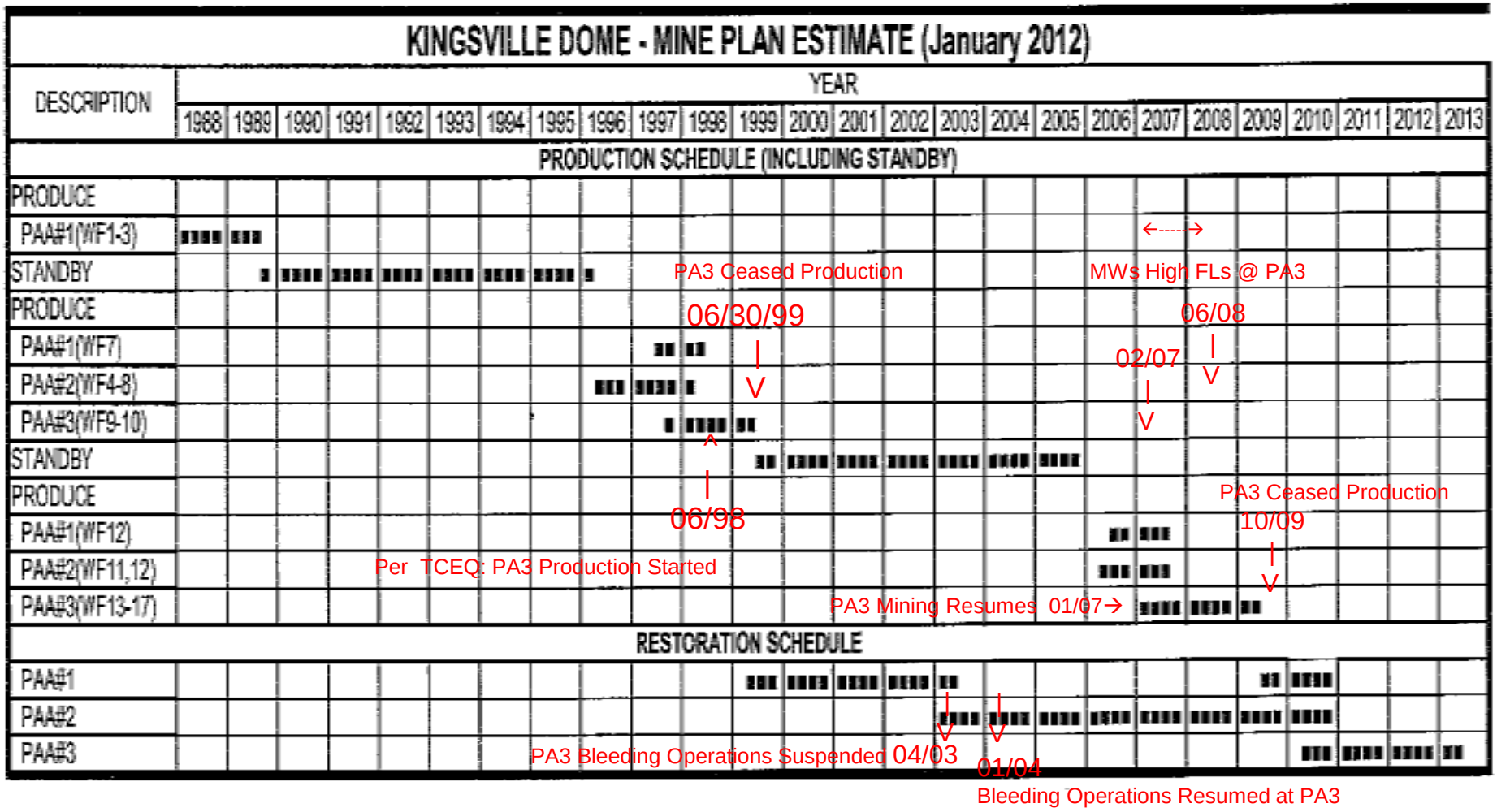
I am not sure what reports she is referring to. She may be referring to the investigation conducted in January 2004. The report does not mention any excursion and I am not aware of any excursion at PA3. When URI had financial difficulties, the restoration activities (maintaining a bleed) at Kingsville Dome facility ceased from April 4, 2003 until January 5, 2004. Prior to this time, a bleed was maintained in well field 9 at PA3. Let me know if I can be of any further assistance.

Ms. Cumberland has requested a meeting prior to my next investigation of Kingsville Dome site to discuss her concern and several others. I have not scheduled an investigation yet.

>>> <Torres.Jose@epamail.epa.gov> 2/13/2007 3:22 PM >>>
Hello Mr. Muhammadali:

Per TCEQ, bleeding activities at PA3 were suspended between April 4, 2003 and January 5, 2004. It is not clear whether there was bleeding operations at Well Field 10. A question to TCEQ on this subject went unanswered.

Mine Operations Schedule

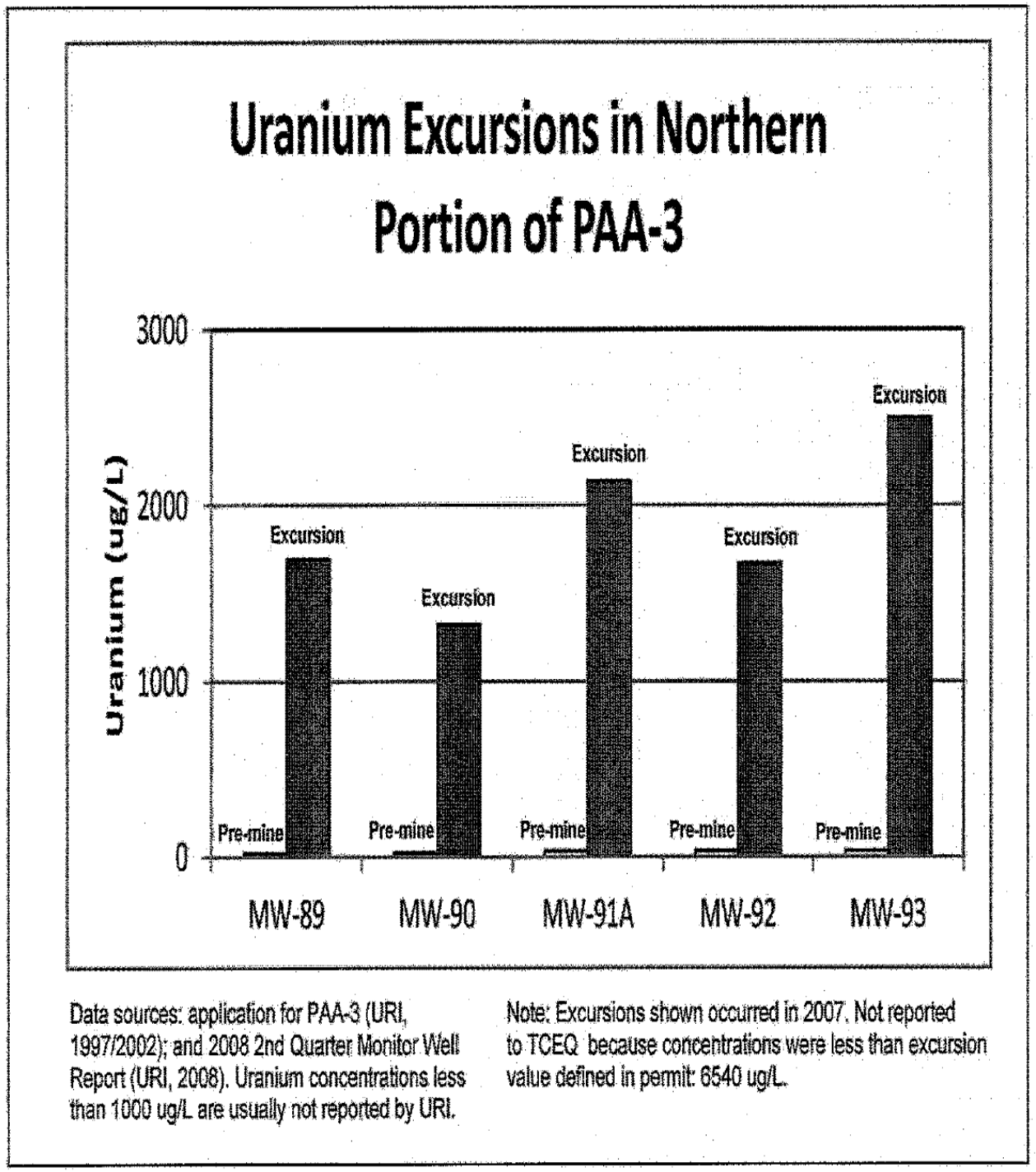


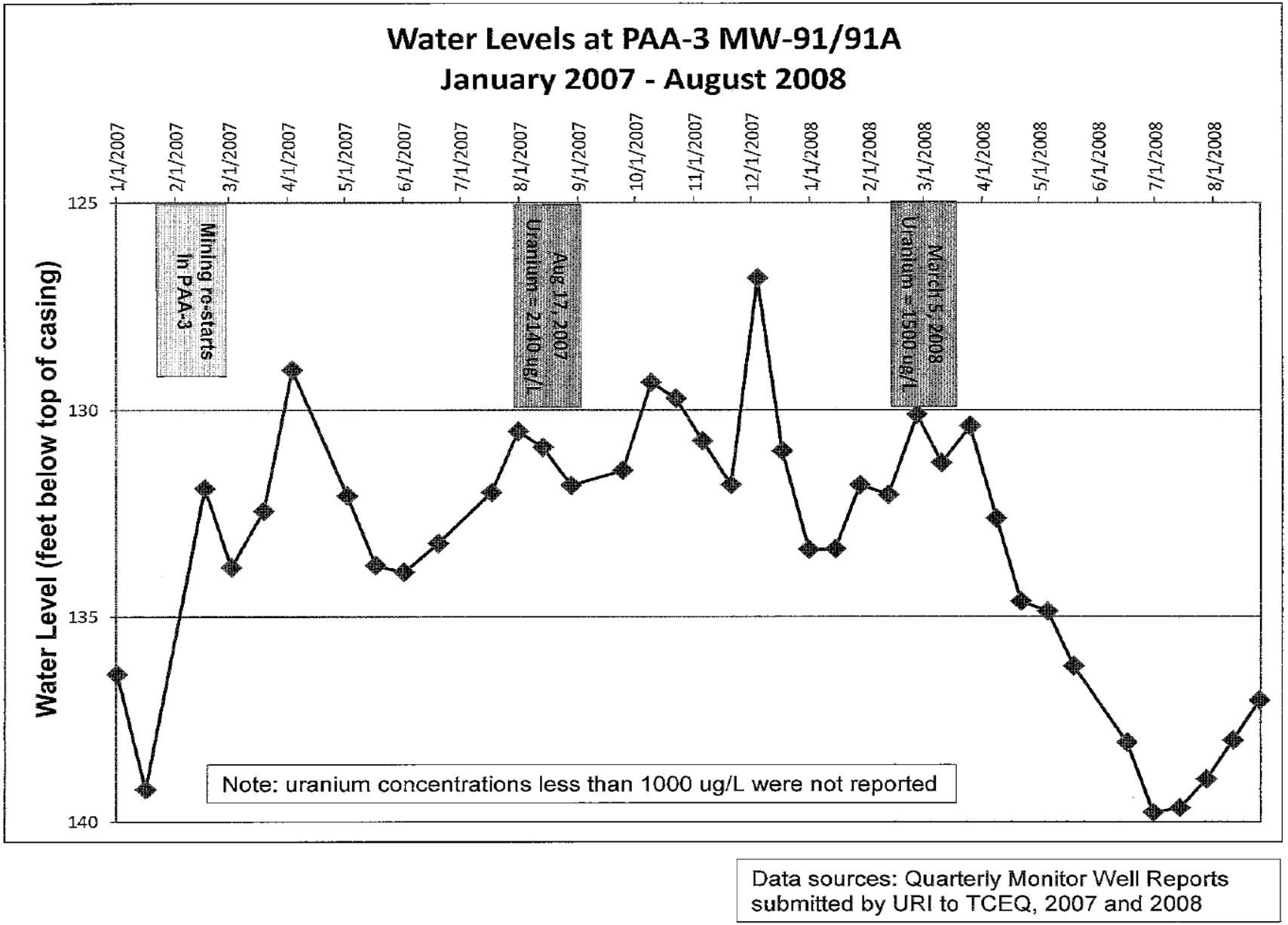
From 2011 Class III Annual Report, January, 2012.

Is it fair to say that the operator may eventually produce from one additional Well Field (15B) in PA-3, not discussed in above Table?.

From Rice's Revised Report (05/07/12):

Excursions NOT Reported unless U Concentrations exceed 6540 µg/L !!!.





Need a Table of fluid level readings to back up above graph. For assessment of Flow Pattern in reservoir and Flow Pattern's corresponding Fluid Flow Velocity, need fluid level readings from as many Monitoring Wells as possible.

Need to review similar Phase Diagrams for Uranium in order to analyze Precipitation Conditions in Aquifer. Evaluate claims of U immobility using Phase Diagrams.

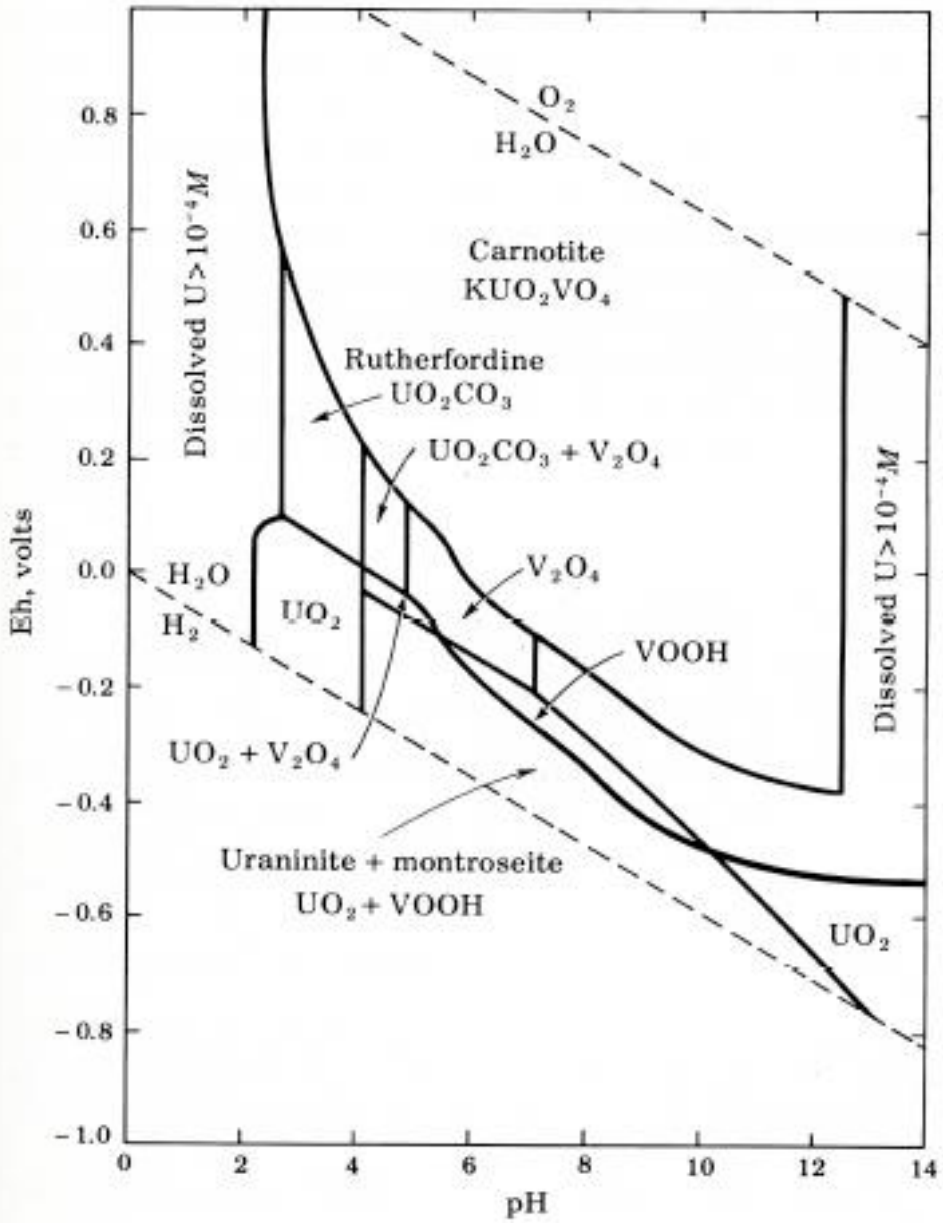
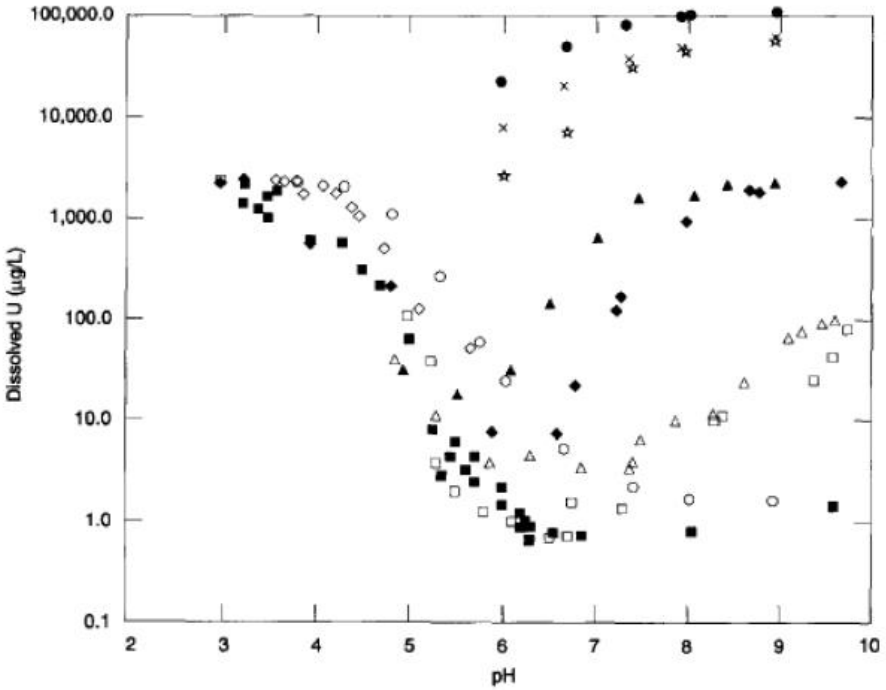


Figure 18-2 Eh-pH diagram for uranium and vanadium compounds at 25°C and 1 atm total pressure. Total dissolved V = $10^{-3}M$, carbonate = $10^{-1}M$. *(Source: Garrels and Christ, 1965, page 393.)*

Are there enough Production Area and adjacent area reliable Ph Data to effectively use this graph to Evaluate U immobility at a given point in the reservoir?.

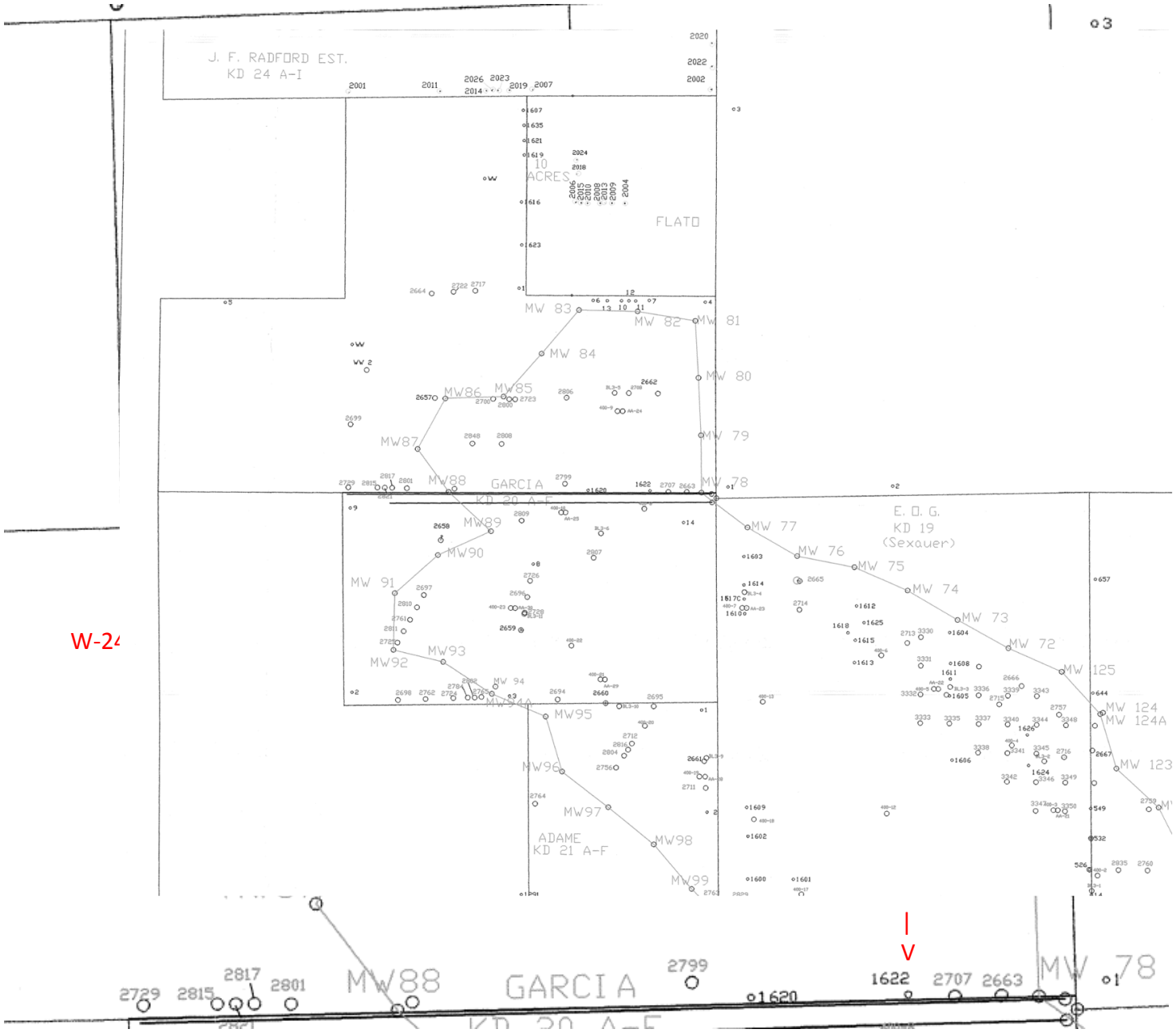
Are there case studies illustrating the successful use of this graph?.

Has anyone attempted to identify which Catalysts affecting U solubility prevail within the reservoir in the KVD area?.

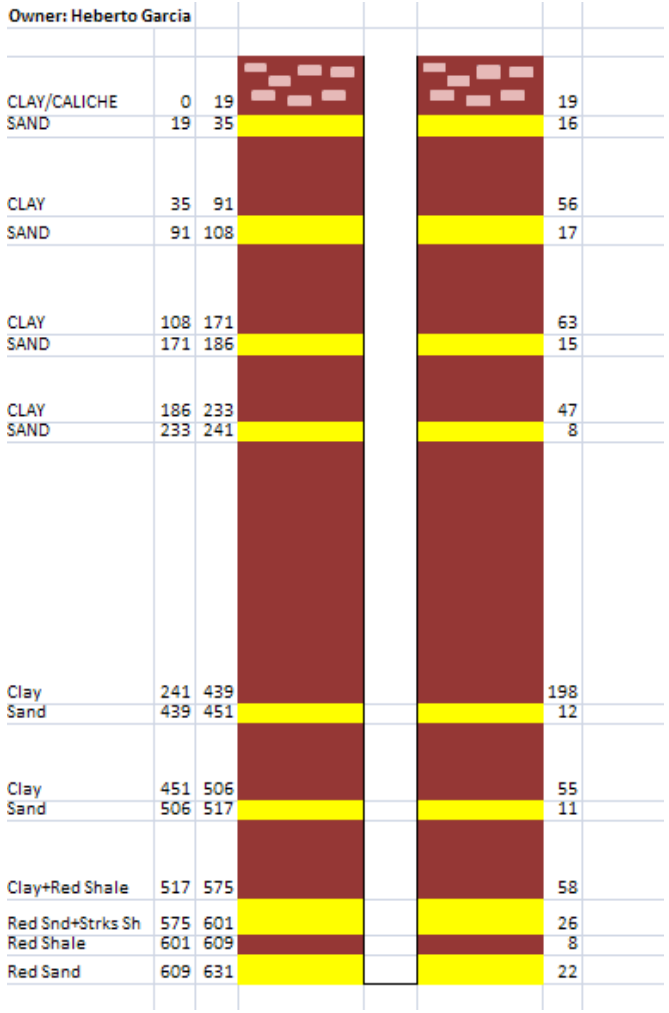


Set		C(IV)	NO_3	S(VI)	Initial U(VI)	$Fe(OH)_3$
		(mol/L)			(µg/L)	(g/L)
1	■	0.0	0.1	0.0	2,380	1.0
2	□	0.001	0.1	0.0	2,380	1.0
3	△	0.001	0.1	0.0	2,380	1.0
4	◆	0.01	0.1	0.0	2,380	1.0
5	◇	0.0	0.1	0.0	2,380	0.15
6	▲	0.0195	0.1	0.0	2,000	0.52
7	●	0.0195	0.0	0.07	100,000	1.0
8	○	0.0	0.0	0.07	2,380	1.0
9	×	0.0195	0.0	0.07	50,000	1.0
10	★	0.0195	0.0	0.0	50,000	1.0

Figure 2.1. Dissolved uranium as a function of pH, carbonate, nitrate and sulfate (Morrison et al. 1995)

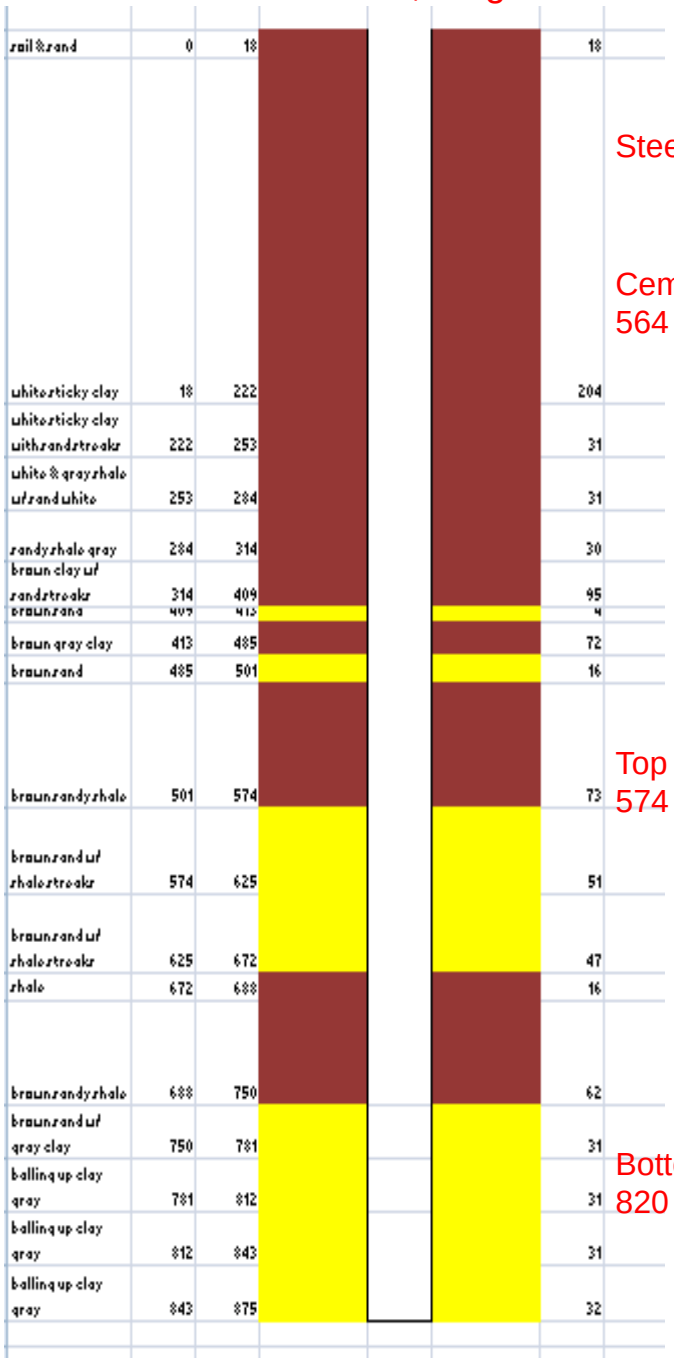


Shown KVD Exploratory Wells' Locations Relative to Garcia Hill WSWs' Locations



GH W-24

TAMUK Well, Kingsville



Steel Casing

Cemented from 564 Ft to Surface

Top of Screen: 574 Ft.

Bottom of Screen: 820 Ft.

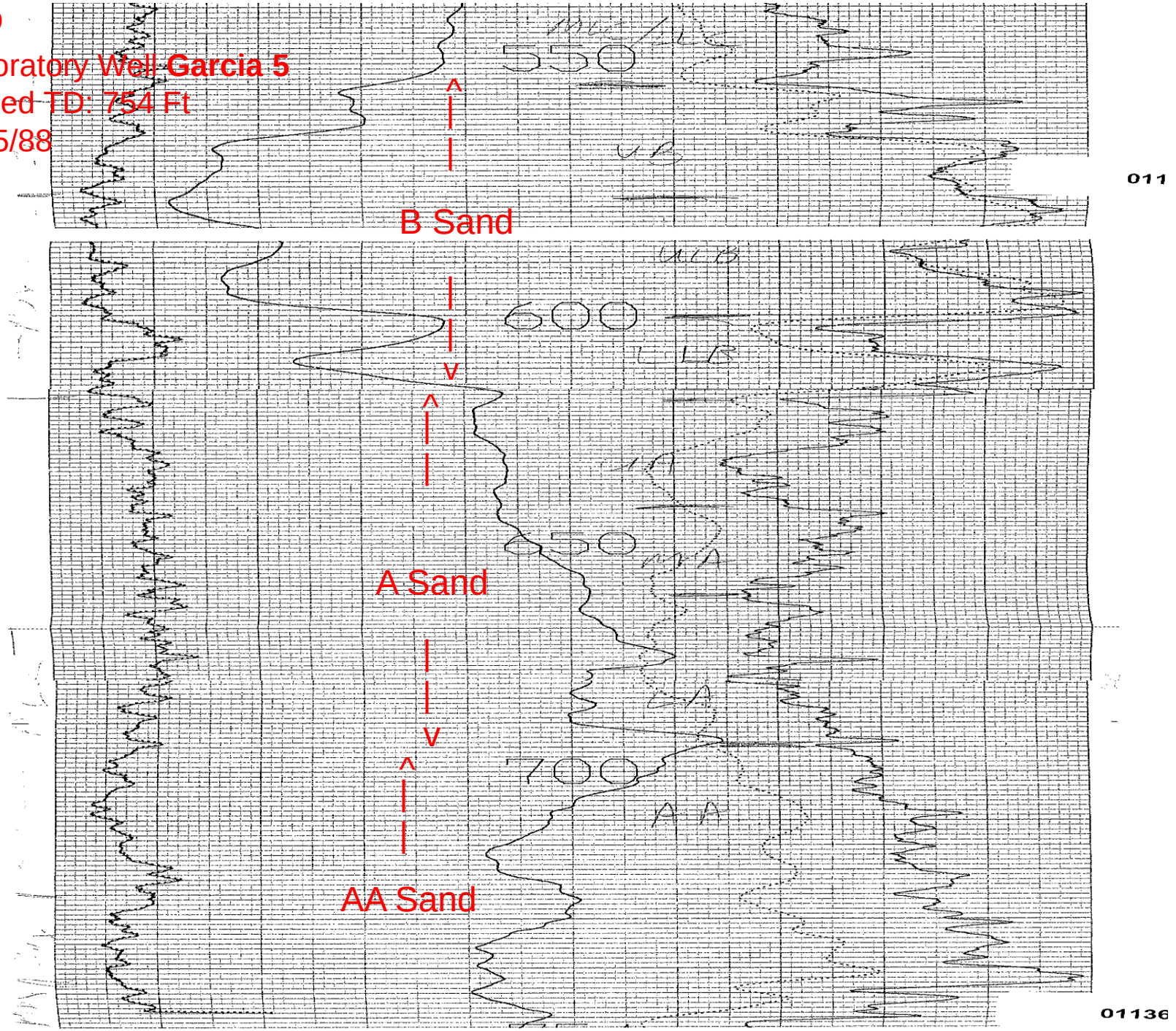
It would appear that the TAMUK Well in the city of Kingsville produces from the “B Sand”, among others.

KVD

Exploratory Well **Garcia 5**

Logged TD: 754 Ft

02/25/88

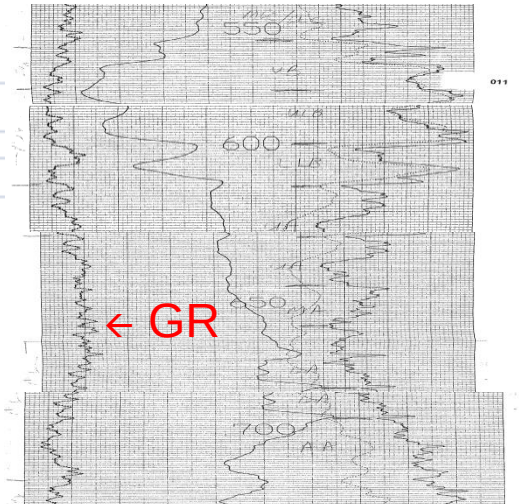


CLAY	35	91	56
SAND	91	108	17
CLAY	108	171	63
SAND	171	186	15
CLAY	186	233	47
SAND	233	241	8
Clay	241	439	198
Sand	439	451	12
Clay	451	506	55
Sand	506	517	11
Clay+Red Shale	517	575	58
Red Snd+Strks Sh	575	601	26
Red Shale	601	609	8
Red Sand	609	631	22

Heberto Garcia Well - W-25

The Garcia 5 Well penetrated the “B”, “A” and “AA” Sands, which do not appear to contain uranium ore at this location. It is located approximately 1146 Ft from the Garcia Hill W-25 and 860 Ft from the Garcia Hill W-24.

Exploratory Well – Garcia 5

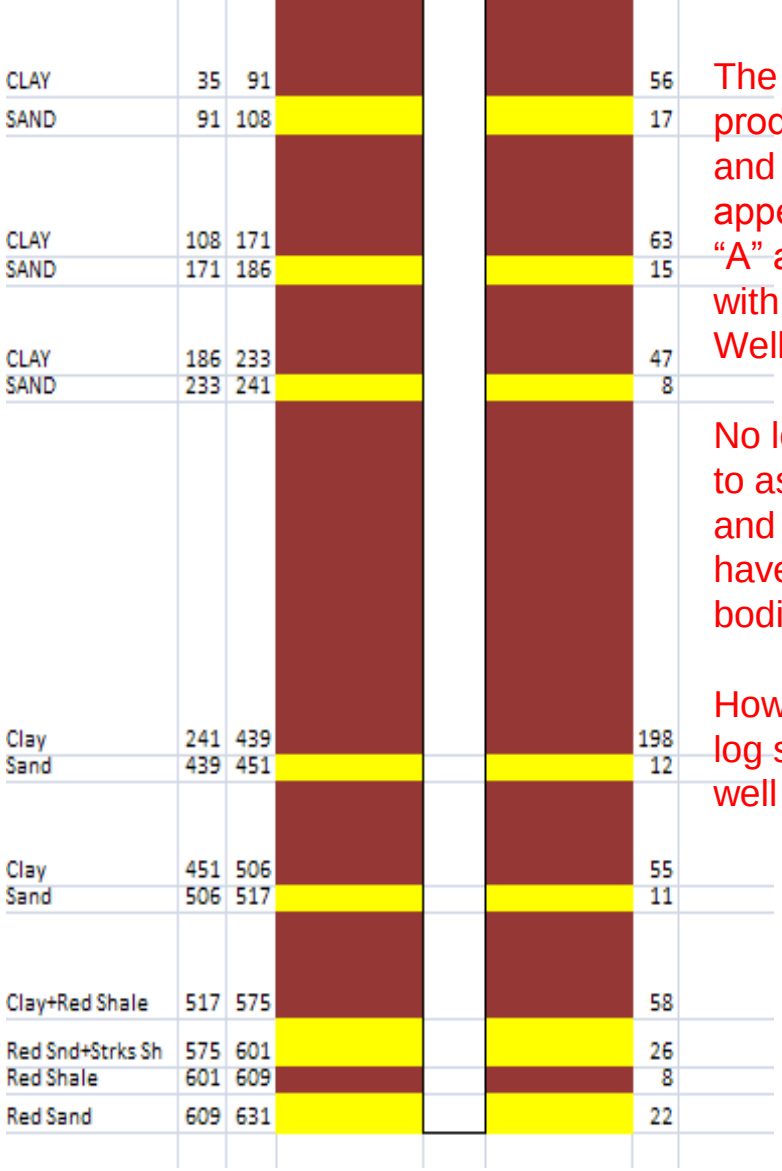


Between the W-25 and the Garcia 5, there is a difference in elevation of about 12 Ft, approximately.

URI, INC.
EXHIBIT - A
PERMIT 54 - ATTACHMENT TO AFFIDAVIT
FEBRUARY 22, 1990

LEASE NAME	HOLE #	PERMIT	Date Drilled	DEPTH	DOWN - HOLE STATUS
EOG	1605	54	07-Sep-89	700	Shurgel
EOG	1606	54	07-Sep-89	700	Cemented
GARCIA	1607	54	12-Sep-89	750	Shurgel
EOG	1608	54	12-Sep-89	700	Shurgel
EOG	1609	54	13-Sep-89	700	Shurgel
EOG	1610	54	13-Sep-89	700	Shurgel
EOG	1611	54	14-Sep-89	700	Cemented
EOG	1612	54	15-Sep-89	700	Shurgel
EOG	1613	54	14-Sep-89	700	Shurgel
EOG	1614	54	18-Sep-89	700	Shurgel
EOG	1615	54	18-Sep-89	700	Shurgel
GARCIA	1616	54	19-Sep-89	750	Shurgel
EOG	1617	54	20-Sep-89	700	Shurgel
EOG	1618	54	20-Sep-89	700	Shurgel
GARCIA	1619	54	21-Sep-89	750	Cemented
GARCIA	1620	54	25-Sep-89	750	Shurgel
GARCIA	1621	54	02-Oct-89	650	Shurgel
GARCIA	1622	54	04-Oct-89	650	Shurgel
GARCIA	1623	54	03-Oct-89	750	Cemented
EOG	1624	54	26-Sep-89	700	Cemented
EOG	1625	54	27-Sep-89	700	Shurgel
EOG	1626	54	05-Oct-89	650	Cemented
→ GARCIA	→ 1627	54	28-Sep-89	770	Water Wel ←
GARCIA	1635	54	06-Oct-89	650	Shurgel

Of the Garcia exploratory wells URI drilled in 1989, only one was completed as a Water Well, the Garcia 1627 listed here. It later came to be known as the Garcia Hill W-24.



Heberto Garcia Well
Garcia Hill W-25
(05/05/67)

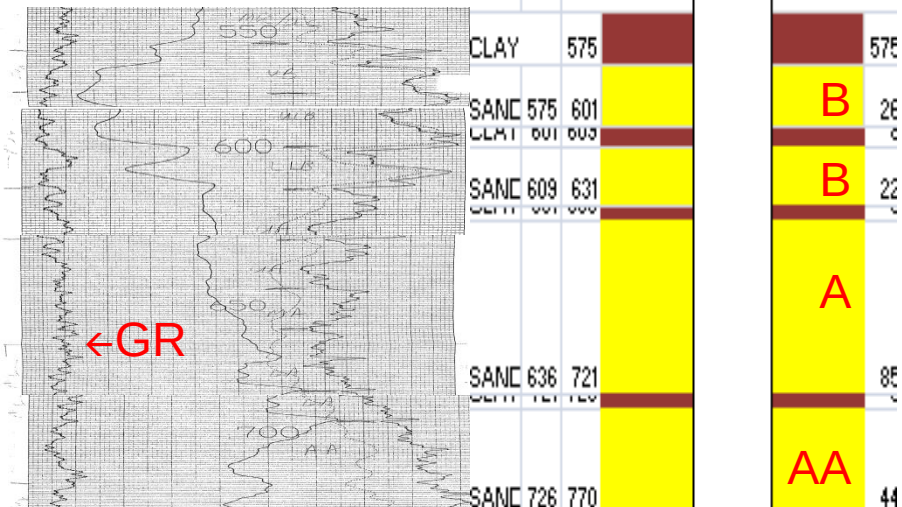
The Garcia Hill **W-25** well produced water from the "B Sand" and the Garcia Hill **W-24** appears to produce from the "B", "A" and "AA Sands", per analogy with the Exploratory Garcia 5 Well Log and URI records.

No logs are currently available to assess whether the **W-24** and **W-25** Garcia Hill Wells may have penetrated uranium ore bodies.

However, exploratory well Garcia 5 log shows no evidence that the well penetrated uranium ore.

Garcia Hill W-24
(09/28/89)

Expl. Well – Garcia 5



Heberto Garcia – W-25 (5/05/67)

Owner: Heberto Garcia

CLAY/CALICHE	0	19	19
SAND	19	35	16
CLAY	35	91	56
SAND	91	108	17
CLAY	108	171	63
SAND	171	186	15
CLAY	186	233	47
SAND	233	241	8
Clay	241	439	198
Sand	439	451	12
Clay	451	506	55
Sand	506	517	11
Clay+Red Shale	517	575	58
Red Snd+Strks Sh	575	601	26
Red Shale	601	609	8
Red Sand	609	631	22

TD

Garcia 1622 (10/04/89)

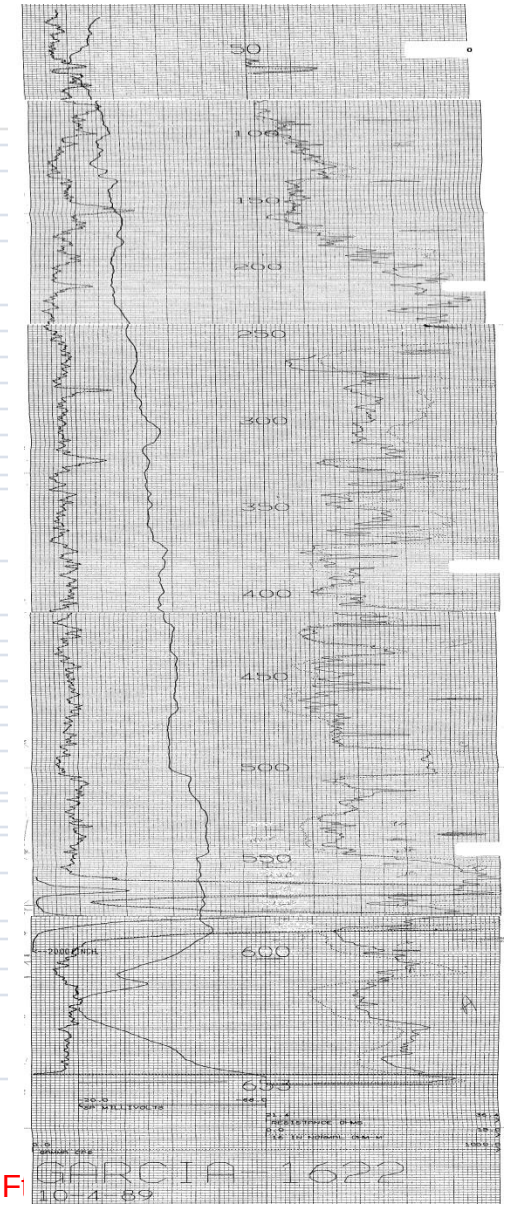
?

	80	90	10	
SAND	90	134	44	E
SHALE	134	171	37	
	171	258		D
	258	272	14	
	272	301	29	D
	301	314	13	
	314	323	9	D
	323	329	6	

Sand?

	329	373	44	D
	373	405	32	
	405	423	18	D
	423	431	8	
	431	441	10	D
	441	468	27	
SAND	468	507	39	C
SAND	510	528	18	C
SHALE	528	547	19	
SAND	547	570	23	B
SHALE	570	577	7	
SAND	577	591	14	
SHALE	591	600	9	
SAND	600	653	53	A

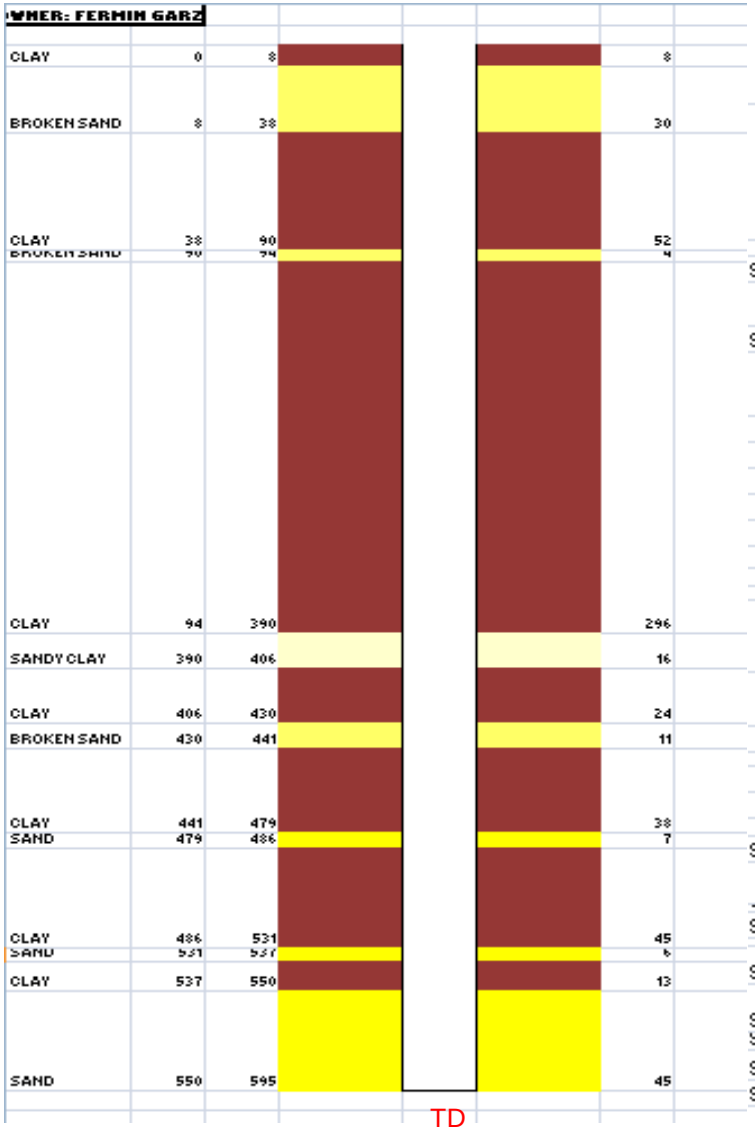
TD



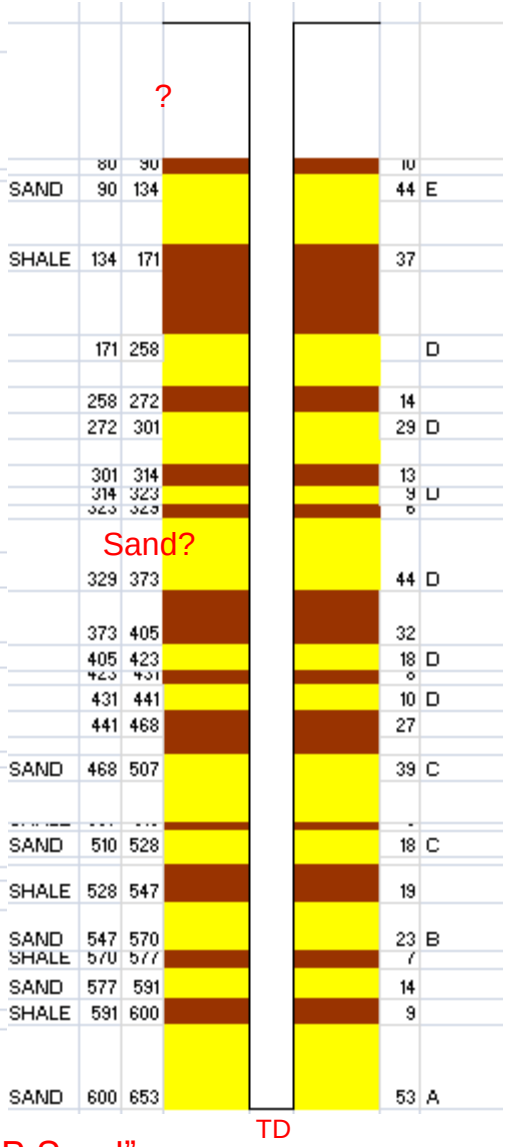
The Heberto Garcia (W-25) Well is completed in the “B Sand”

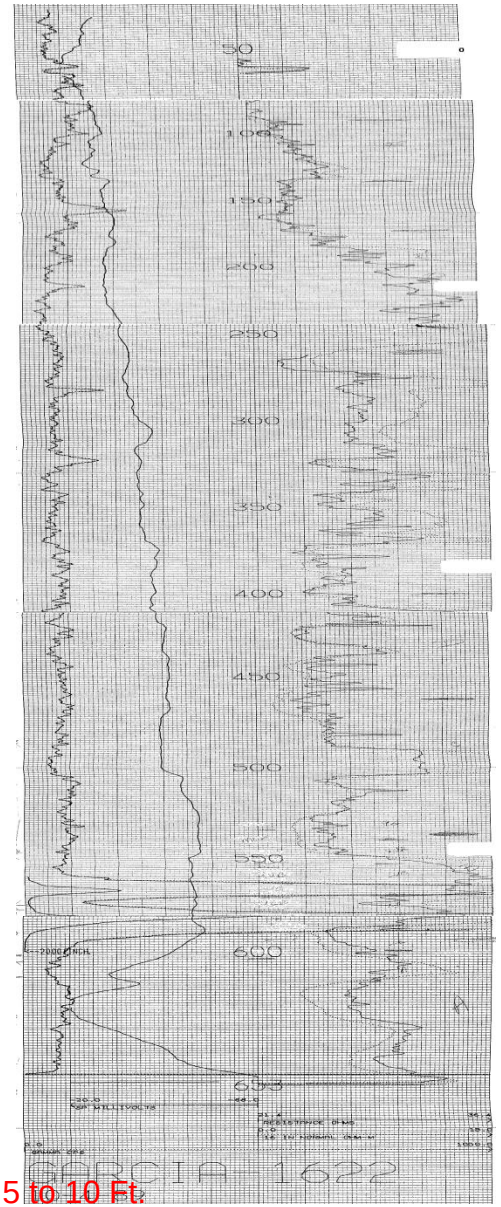
Between the W-25 Well and Garcia 1622, there is a difference in elevation of about 25 F

Fermin Garza (4/30/09)



Garcia 1622 (10/04/89)





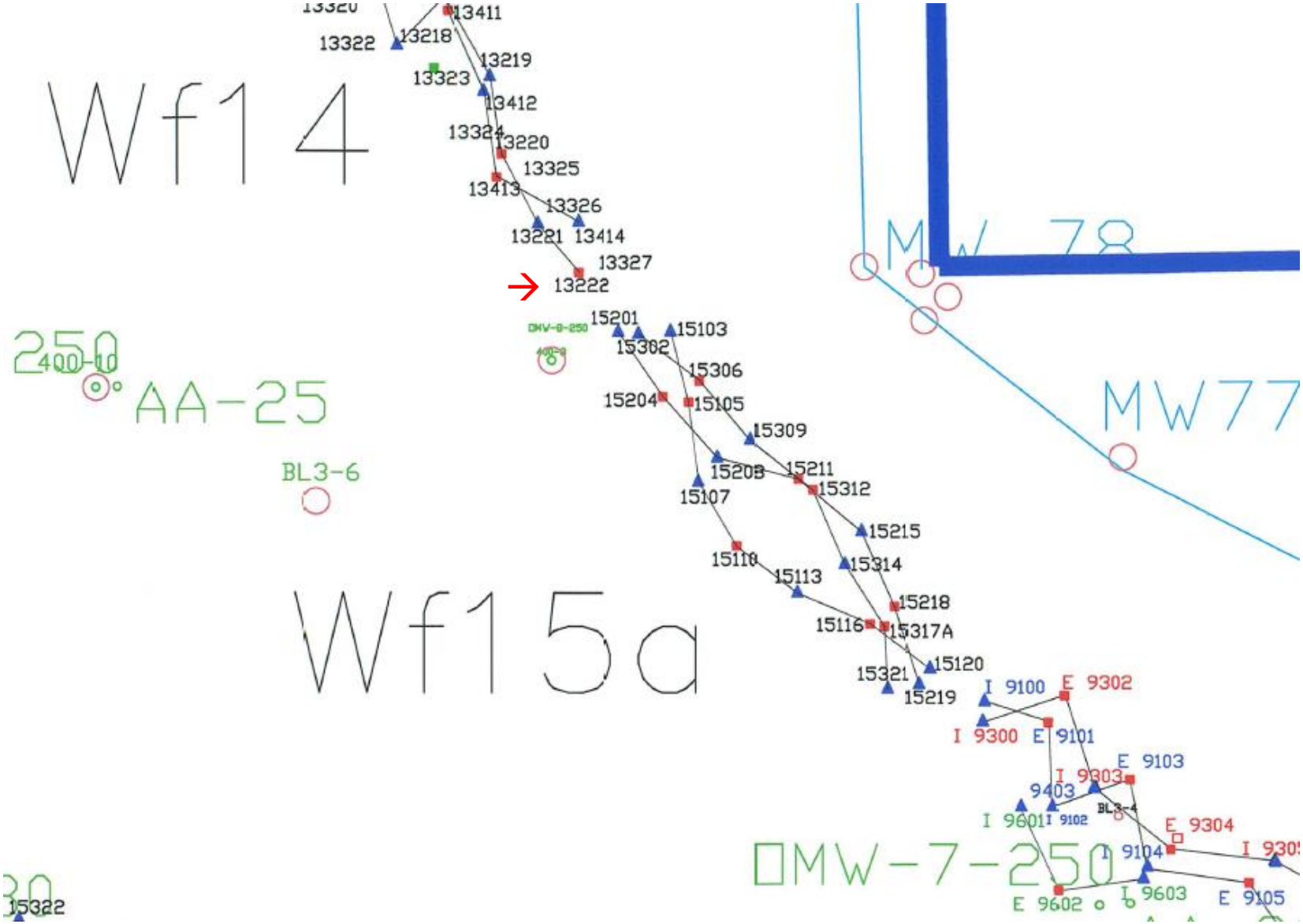
The Fermin Garza Well is completed in the “B Sand”

Between the F. Garza Well and Garcia 1622, there is a difference in elevation of about 5 to 10 Ft.

soil & sand	0	18	18
white sticky clay	18	222	204
white sticky clay with sand streaks	222	253	31
white & gray shale w/ sand white	253	284	31
sandy shale gray	284	314	30
brown clay w/ sand streaks	314	409	95
brown sand	409	413	4
brown gray clay	413	485	72
brown sand	485	501	16
brown sandy shale	501	574	73
brown sand w/ shale streaks	574	625	51
brown sand w/ shale streaks	625	672	47
shale	672	688	16
brown sandy shale	688	750	62
brown sand w/ gray clay	750	781	31
balling up clay gray	781	812	31
balling up clay gray	812	843	31
balling up clay gray	843	875	32

CITY OF KINGSVILLE WELL

clay	2	18	16
clay	23	210	187
clay-very soft	212	240	28
sandy-soft clay	272	320	48
shale	320	410	90
sand-very fine	410	440	30
clay	440	459	19
sand-silty	459	469	10
clay	469	558	89
sand-fine	558	568	10
clay-reddish-yellow	568	609	41
sand/shale stripe	614	650	36
sand	653	663	10
sandy shale-firm	663	688	25
Soft grainy snd.	688	706	18
sand	710	738	28
sandy shale	738	750	12
sand	750	765	15
sandy clay	765	819	54



KVD PA-3 Segment. Was Exploratory Well Garcia 1622 Completed as a "B Sand" (?) Producer 13222?.
Note that Injector 13326 is not connected to 13222 suggesting completion in different zones.
Is there information documenting Which Sands were produced at PA-3?

MEMORANDM

TO: Dale Cumberland August 21, 2006

FROM: Mark Pelizza

SUBJECT: Response to Email on Lease Issues

The following is my response to your recent email. I have tried to take each issue and break out the response in turn. If I did not read the question correctly, or missed something, just let me know.

1. Reserves on Cumberland Leases

Response: URI cannot state the ore reserves on the Cumberland leases nor what the production potential will be. I.e. even though URI believes there is mineral in commercially producible quantities on

Uranium is found in water due to the erosion of natural deposits. URI, and every expert that has reviewed the Garcia situation, has concluded that the uranium and uranium related minerals in the Garcia water wells are naturally occurring. The Kingsville Dome uranium ore zone runs through production area 3 and then under Garcia Hills. Uranium is naturally found in ground water in and around uranium ore. Uranium concentrations ranging from 19 to 1,540 micrograms per liter were documented before mining in production area 3. The concentrations of uranium in the Garcia water, be it the samples from the 1987/88 purported well samples or the 1997 and later URI monitoring samples, all fall within this range of naturally occurring uranium found in the same sand to the east in production area 3. Since the orebody trends past the Garcia well it is expected that water there will fall within this range.

Excerpt from memoranda documents claims that PA-3's ore body extends into Garcia Hill

The exact location of the 1987 and 1988 Garcia sample is not clear. The wells in and around the Garcia property that were sampled in 1987 and 1988 have now be plugged or abandoned or have fallen to disrepair. There was one well in a field to the north east of Garcia Hill that was functional in 1988 but is now abandoned. Another well is just a few hundred feet east of the pump house but is not functional. In addition, in 1989 URI plugged a well near the Garcia pump house and drilled a new replacement. So, even if the 1987 and 1988 information were substantiated as coming from Garcia area wells, the baseline information that were obtained from wells in 1987 and 1988 are not applicable to the information that comes from the well that URI drilled in 1989. The Garcia well that URI routinely samples, and the EPA found exceeded uranium concentrations by 7X, was the one drilled by URI in 1989; after the 1987 and 1988 samples were taken. Therefore, the groundwater that was sampled at Garcia Hill that began in 1997 before mining in PA3 and continued to this day, cannot be the same groundwater that was analyzed and reported in 1987 and 1988 because the well was not there.

New ▾ Forward ▾ Display ▾ More ▾

{In Archive} sentences copied from Pelliza memo

Elizabeth Cumberland to: Jose Torres

02/09/2007 12:25 PM

Hide Details

From: Elizabeth Cumberland <ECUMBERLAND@peoplepc.com>

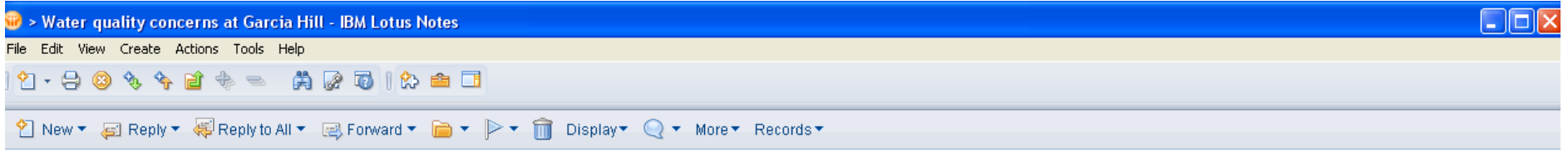
To: Jose Torres/R6/USEPA/US@EPA

Archive: This message is being viewed in an archive.

Please note the following two sentences which I have copied from the Pelliza memo which I have emailed to you:

So, even if the 1987 and 1988 information were substantiated as coming from Garcia area wells, the baseline information that were obtained from wells in 1987 and 1988 are not applicable to the information that comes from the well that URI drilled in 1989. The Garcia well that URI routinely samples, and the EPA found exceeded uranium concentrations by 7X, was the one drilled by URI in 1989; after the 1987 and 1988 samples were taken.

It appears from Mr. Pelliza's statement that in 1989 URI installed the well that was found to be contaminated at least as early as December 1996.



Water quality concerns at Garcia Hill

Ben Knape to: Jose Torres

Cc: dellinger.phillip, David Gillespie, "Diane Goss", "Don Redmond", "Muhammadali Abbaszadeh", "Susan Jablonski"

11/12/2010 04:44 PM

Show Details

3 attachments

2004 11-15_EPA letter to Garcia Hill Residents_att.pdf irgw55@tceq.state.tx.us_20101108_112611.pdf 200603-10a_OrderforPAA3,WDW-247,andWDW-248.pdf

Jose:

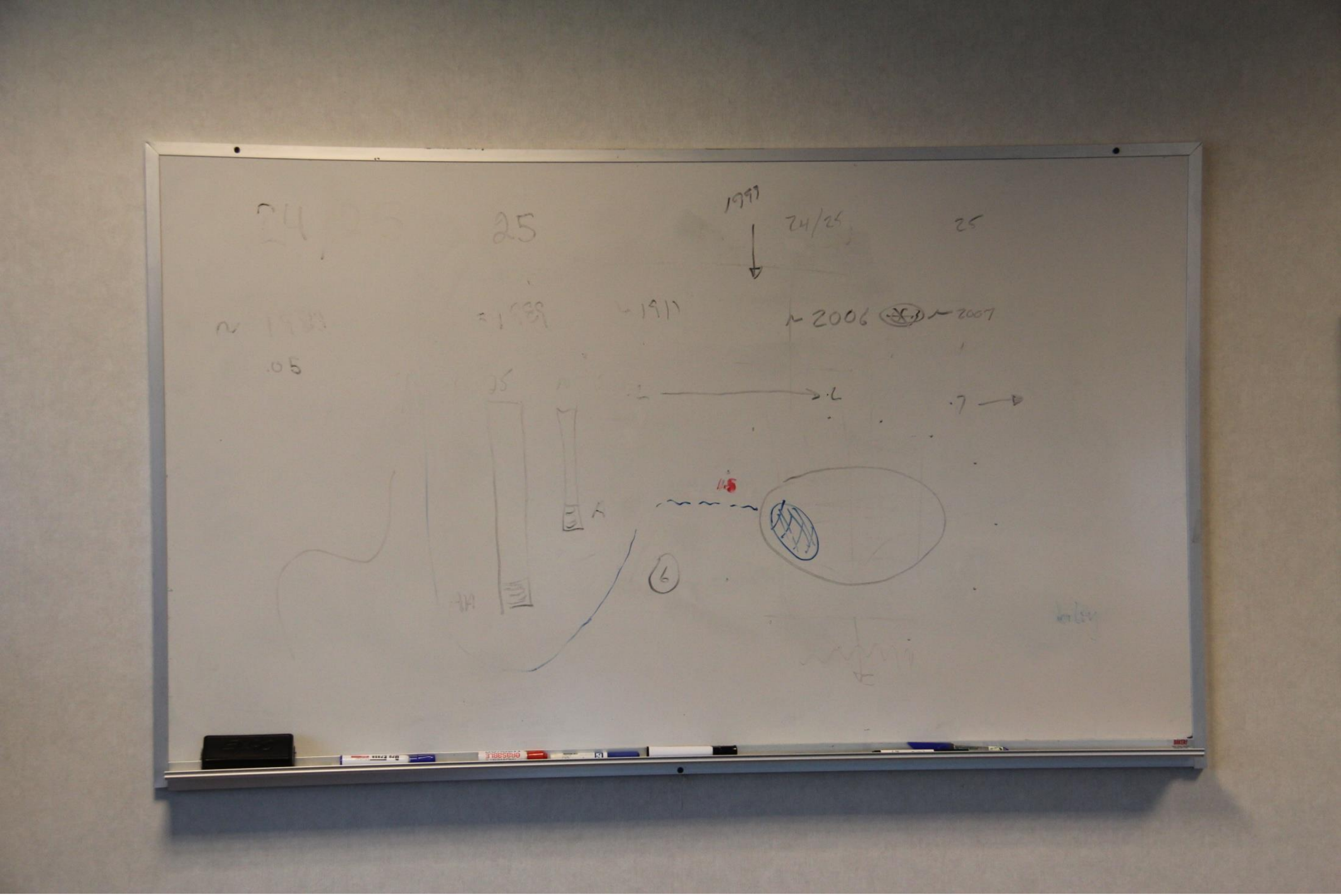
This issue was addressed in the contested case hearing that was held in 2005 on URI's application for PAA3 and for renewal of the WDW permits. In fact, it looks like some of the documents attached to your email are part of the evidentiary record. The protestants alleged that elevated levels of uranium in the Garcia Hill water wells were caused by URI's activity, but presented no evidence to support this. The only evidence on this issue was that the uranium ore trend in production area 3 extends beyond the URI permitted area into the Garcia Hill area. That is, the Garcia Hill wells are likely situated in or very close to uranium ore and that the elevated levels of uranium and gross alpha radiation are present in the water naturally. The commission granted the application for PAA3 (order is attached.) The matter is still under appeal in Travis County District Court, but the protestants have not been prosecuting their appeal.

Both EPA and TCEQ sent letters (see attached) to the water well owner about the elevated levels of uranium and gross alpha radiation. It is our understanding that the Garcia Hill area was hooked up to a public water system and that the wells in Garcia Hill are no longer being used for human consumption. We are not aware of any studies on-going on the issue.

-Ben Knape
TCEQ

"The only evidence on this issue… …the Garcia Hill wells are likely situated in or very close to uranium ore…"

Ben Knape on 11/12/2010



Notes of Telephone Conversation with Martin Utley

09-02-2012

I spoke to Martin Utley, a former employee of URI, by telephone from his parent's home off CR 2170 in Ricardo at around 1:30 p.m. and I asked Martin if he had knowledge, as a former employee of URI, of the water level changing when a new water well was put into operation in the southern part of Kingsville and he said that he did. He remembered that in the late 1980's when a then new water well was put into operation in the southern part of Kingsville to serve the water needs of Kingsville, he could "tell when the pump was turned on in Kingsville because the water levels went down in PAA 2". He said he was an employee of URI at that time and the drawdown of fluid levels in PAA 2 caused by the pumping (of the Kingsville well) demonstrated communication. He also said that I could use his name as the source of information and that he would provide me with additional information at a later date.

Eleuterio (Teo) Saenz

September 2, 2012

2 pm. –Home of Teo Saenz

Mr. Martin Utley stated that he had started to work with URI in 1986-1987 and had left in 1998. His job title while at URI was Radiation Safety Officer and Martin described how he was responsible for checking water and soil samples and obtaining water level recordings for each of the monitor wells. He observed a dramatic water level drop (as detected by the monitor well recorders) in the northern most monitor wells in Paa2 in the late 80's while he was working for URI and he became worried and he passed on his concern to Paul Goranson, Reservoir Engineer for URI, who said he would look into it. Mr. Goranson then told Martin that the water drop occurred when one of the most southernmost Kingsville water wells turned on and not to worry. He said he had firsthand knowledge of the drop in PAA 2 and later observed in PAA 3 water level recorders because he would collect the data logs from the recorders and file them for State Agencies to inspect and he saw the logs directly and this was not information told to him by a third person. He said he could tell by the logs when the water pumps ('s) turned on in Kingsville which proved communication between the Kingsville pumps and PAA 2 and 3. Martin stated that the logs showed the greatest draw down in the northernmost monitor wells. Martin said it was well known by URI that the Goliad formation was known for "real good communication". He said all we had to do was check the water well recorder logs to prove that. We agreed to meet again in a few weeks.